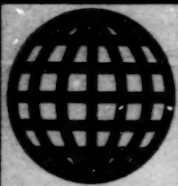


JPRS-UEA-88-019  
27 MAY 1988



**FOREIGN  
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# ***JPRS Report***

# **Soviet Union**

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***Economic Affairs***

# Soviet Union Economic Affairs

JPRS-UEA-88-019

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27 MAY 1988

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## ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

### **Economist Challenges Shmelev's Call for Higher Debt, Ruble Convertibility**

18200146 Moscow *EKONOMICHESKAYA GAZETA* in  
Russian No 16, Apr 88 p 21

[Article by B. Sergeyev, candidate of economic sciences:  
"Lest Advances Become Debts"]

[Text] There is a vigorous search today for optimum solutions to many economic problems of the day. Some of them like ruble convertibility and issues related to the external debt have never before been up for discussion by broad groups in the community. Now that such discussions have been brought about by the very nature of restructuring, differing opinions are being expressed, not all of them based solely on a serious analysis of the issue, but sometimes simply on emotions or fond wishes.

But emotions alone are insufficient here. After all, we are talking about the destiny of the country's economy, and this obligates us to think about the interests of the state and to advance proposals, be they ever so radical, that are well-thought-out and substantiated. Unfortunately, some publications have not been displaying this fundamental and judicious approach to the problem.

To be specific, this is the sin committed by the article of N. Shmelev published in the sixth issue of the newspaper *MOSKOVSKIYE NOVOSTI*. It was entitled "The Ruble and Restructuring," and was devoted to an extremely important and topical problem. The author rightly feels that in the context of the transition to predominantly economic methods of management it is the ruble—its reinforcement and security—that must move to the center of the restructuring of our economic mechanism.

Along with indisputable ideas and statements the article also contains propositions whose implementation today, given the present capabilities and state of our economy, would in our opinion threaten an outcome of serious losses instead of benefits. This applies above all to what he had to say about foreign credits, strategies for the transition to ruble convertibility, and the equalization of domestic prices with world prices.

#### **Trying on the Debt Noose**

The author deems it possible and very necessary to sharply increase the share of foreign credits in financing our economy, but he does not even make an attempt to answer the simple question that asks itself: Who, how, and from what source will pay the debts back?

The economic, social, and certain other problems which have been faced by Yugoslavia, Hungary, Poland, and the developing countries because of the growth of their foreign debt are simply ignored by the author. He

attempts to put the reader at ease by saying that the Soviet Union still has some leeway in taking credits and that we still have not come to the "danger line." Feeble consolation.

Of course, all the industrially advanced countries taking an active part in world trade make extensive use of credits, especially short-term credits related to commercial transactions. This is today an indispensable element in efficient foreign economic activity. But a difference has to be drawn between the short-term credits that facilitate current foreign economic operations and medium- and long-term credits. There can be no discussion on a professional level about "credits in general."

If we are to talk about long-term credits, then there is an economic justification for using them to build a highly efficient export industry that would be competitive on the world market. Indeed this at first seems to be the author's point of view. But if the logic of his arguments is followed, and several tens of billions of dollars, as he proposes, are borrowed to buy imported equipment, will we not end up in the situation of the early eighties: in warehouses heaps of uninstalled equipment purchased indiscriminately for hard currency, while the debts on that equipment are still being repaid with raw materials? It would seem that everyone is now already aware of the danger of the "import plague" at all levels of economic activity, but today the thesis is again being advanced about large-scale purchase of equipment on credit which cannot be installed and started up immediately for many reasons, so that we are knowingly doomed to lag behind. What is more, repayment has to be made with petroleum, whose price is dropping.

There are also a number of other circumstances well-known to specialists which should be mentioned.

First, it is a hazardous operation to take loans on a large scale. There are limits, mentioned by N. Shmelev himself, beyond which creditors cannot go regardless of the circumstances. In international practice it is a rule of thumb that if the total annual payments on foreign debt begins to exceed a certain share—approximately one-third—of receipts from all foreign economic operations, the country falls in the category of "faulty" debtors. With that kind of reputation it will not be able to get new loans. Even if someone should "be kindhearted," he will collect truly usurious rates of interest. As experience is now demonstrating, the international financial community is merciless toward those who fall into the debt trap. It is no accident that USSR Vneshekonombank has even in the most difficult periods striven not to push these limits to the end and has used every effort to maintain the Soviet state's solid reputation on the world credit market. Why undermine it now in the context of restructuring? Even the bond market has its limits.

Second, payment has to be made on the credits. At present we are able to pay for them not so much with our labor as with mineral resources. And this is economically

inefficient, especially given the unstable conditions for selling raw materials on international markets. Talking does not retire debts.

These are all the axioms of present-day international economic life. It is surprising that the author of the article in MOSKOVSKIYE NOVOSTI ignores them.

At the present time raw materials predominate in the structure of our exports to the West, and the prices for them, according to UNCTAD data, are at the lowest level in the last half-century, so that we should be extremely cautious in undertaking any further growth of the debt. Otherwise we will have to resort to yet another "piece of advice" from N. Shmelev—to turn over our enterprises to creditors in repayment of the debts.

And this is precisely where the formula the author proposes leads—turning long-term credits into stocks and bonds of joint enterprises accompanied at the same time by renunciation "of the rigid principle of ownership for our own benefit." Why should we try on this variety of "new colonialism"? It seems very doubtful that we ourselves need to "make the necessary efforts" to fall into bondage to international financial circles.

#### Convertibility—But Only on a Firm Foundation

Adoption of "financial convertibility" of the ruble, establishment of a "real and single" rate of its exchange, might become an immediate goal of our monetary policy, in the opinion of N. Shmelev, since this would make it possible to make exporting more attractive to our enterprises, to "convert" debts, to remove the "obstacle" to creating joint enterprises.

Introduction of step-by-step convertibility of the ruble is, of course, regarded today as one of the possible and realistic ways of carrying out a judicious strategy for the transition to progressive new forms of foreign economic cooperation. To be specific, this was discussed in an article entitled "Convertibility of the Ruble—On the Agenda" (EKONOMICHESKAYA GAZETA, No 9). The approach proposed by N. Shmelev could only compromise this effort, which is important to the national economy. Judge for yourself.

There is not a single country in the world where convertibility has ever been an end in itself. This is always an instrument of monetary policy corresponding to a high or at least stable level of the national economy's international competitiveness. Regrettable as it may be, the absence of ruble convertibility reflects the present state of affairs in our national economy that took shape in the stagnant period—above all the low competitiveness of most domestic goods on the world market and the underdevelopment of our commodity-money relations.

We all know how dangerous illusions and premature moves are for development of the domestic economy. But they are doubly dangerous in international relations. Explanations and assurances are not accepted there. Payment there has to be made strictly in cash.

To be fair, we should note that N. Shmelev is not proposing full convertibility, but some truncated form—"among central banks." To be sure, there is no such concept in international practice. There is convertibility for residents and nonresidents, convertibility for various types of operations—trade, services, and movement of capital. The reference is obviously to the opening of reciprocal accounts by Soviet and foreign banks. But foreign banks have ruble accounts in Vneshekonombank even now. For well-known reasons they have not become widespread: from the standpoint of the Western businessman the selection of goods which he can buy today in our country for rubles is very limited.

Technically, there are no great difficulties in opening ruble accounts abroad. But the real use of such an action as a major additional source of foreign exchange appears highly doubtful and will not yield an appreciable growth of foreign exchange resources.

The ruble funds attracted in that way will slowly be included in our overall debt limit. As a consequence this will restrict opportunities for attracting foreign credits in a more efficient form, that is, in the necessary convertible currencies: dollars, English pounds sterling, West German marks, and others.

It is, of course, convenient to pay for imports in one's own currency, but one has to be ready for those funds to be presented for payment. We will not see convertibility without high efficiency of the economy and without developing exports of machines and equipment.

Convertibility means responsibility first of all and the advantages come only thereafter.

As for joint enterprises, N. Shmelev once again sees the absence of ruble convertibility as the main obstacle standing in their way. The experience of the socialist countries where convertibility does not exist, but where there are such enterprises, indicates the opposite, however, in the great majority. As our own experience demonstrates, the obstacle to development of this new form is that many of our leaders in the economy, enterprise directors above all, lack experience and know-how in conducting business abroad.

#### Inexchangeable Categories

In the opinion of N. Shmelev, debts might serve as a guarantee of convertibility. Since on the whole we are creditors, the author writes, we need to create the opportunity for conversion of debts, that is, for maneuvering with the various types of our debts and debts to us, all the way to exchanging certain debts for others.

We might ask: Who and what are we to maneuver? To replace the debt to us owed by Poland, Vietnam, or Mozambique by our debts to the West? It is an original idea, but unrealistic. For a start, it obviously would be a good idea to ask both the creditors and debtors if they consented to such an operation? That would not seem to be very likely.

In addition, we need to bear in mind that other countries pay off most of our credits with deliveries of traditional or new goods which are extremely necessary to us. They include, for example, Cuban sugar, Polish ships, rubber from Vietnam, and Indian tea. It would seem that Soviet consumers will hardly be gladdened by the prospect of a more acute domestic shortage of these and a number of other commodities.

What is more, there still exist such concepts as economic cooperation on an equal footing and mutual assistance, which we are not replacing and are not a bargaining point.

The article "The Ruble and Restructuring" also raises the question of the exchange rate of the ruble against foreign currencies. At present more than 2,000 coefficients are applied to it. Establishment of a single exchange rate for the ruble would actually make it possible to establish direct connections between our internal and external prices. But the simple demand for setting a single exchange rate turns everything on its head. After all, it is not prices that are a product of the exchange rate, but on the contrary, the exchange rate reflects the relation between internal and external prices. What is more, one is alarmed by the author's categorical statement that in practice establishing a real and single exchange rate of the ruble would signify its devaluation. To draw such a conclusion without proof, without relying on economic calculations, is a mark of superficiality in judgment, to say the least.

Our exchange rate and the thousands of coefficients applied to it are a direct reflection of the price mechanism, which has been and at present remains a command mechanism that in large part is economically unsubstantiated; some prices are realistically justified on the domestic market, while others are set by administrative edict. It will take a pricing reform to correct the situation. But until that reform takes place, the single exchange rate is nothing more than fantasy.

Imagine a train whose steps are at different levels. It is not possible to build a single platform for these steps at different levels—a different set of steps is needed to enter every car. This is the role that is performed by the differentiated currency coefficients. Even if they were replaced by customs duties, subsidies, and rebates, that does not change the essence of the thing.

The main shortcoming of the present system of coefficients lies not so much in the abundance of exchange rates as in their inflexibility, inability to take into account the change in market conditions and the product's real production costs.

It is sometimes proposed that we start by leveling our domestic prices to world prices by adopting a "real exchange rate." If the old system of pricing is preserved, it would be difficult to imagine a venture more futile for the economy and the consumer; in 2 or 3 years the previous unsubstantiated price structure will be reproduced. In our example this would be equivalent to altering the steps of the train to meet the platform, and the problem would arise once again with the arrival of every new train. After all, it is not possible to adjust steps at a uniform height to platforms at different levels.

In short, restructuring requires competence. Otherwise today's advances will become tomorrow's debts.

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#### **Ferrous Metallurgy Collegium on Problems Under New Conditions**

18200122a Moscow *PLANOVOYE KHOZYAYSTVO* in Russian No 3, Mar 88 pp 3-9

[Account of meeting of the collegium of USSR Minchermet in December 1987 and interview with Aleksandr Ivanovich Soroka, chief of the ministry's economic planning administration, by O. Yefimov: "Ferrous Metallurgy Enterprises Make the Transition to Full Cost Accounting"; place not given]

[Text] Many branches of industry made the transition to operation under the new economic conditions as of 1 January 1988. They included even a leading branch like ferrous metallurgy which to a considerable degree determines the conditions under which a number of other branches conduct their activity. Successful performance under the conditions of full cost accounting (*khozraschet*) and self-financing depends to a considerable degree on the kind of economic indicators a branch brings to the restructuring of its economic activity. In December 1987 an expanded session was held of the collegium of the Ministry of Ferrous Metallurgy to discuss the question of the readiness of the branch's enterprises for the transition to full cost accounting and self-financing.

In his report, deputy minister V.I. Pankrushin noted that preparation for the branch's transition to full cost accounting had begun 3 years earlier with analysis and development of standard rates of consumption and inventories of materials, fuel, and equipment. They were used as the basis for revision of standard allowances of "own" working capital. By mid-September 1987 the work had been completed of calculating the economic benchmarks on which the figures of the 5-year planning period were postulated.

At the same time, the administration and management of the ministry and enterprises prepared themselves to operate under the conditions of the new economic mechanism. These questions were taken up in cluster conferences of directors and heads of economic recordkeeping departments of all the branch's enterprises and were discussed in councils of directors of all-union industrial associations. Further improvement of cost accounting within the production entity, the development of brigade cost accounting, and the restructuring of intraplant planning are continuing at enterprises at the present time.

On the whole, considerable work was done, but it still cannot be said that the branch was fully prepared for the new conditions. Economic infantilism, together with dependency, have up to now been typical of many enterprise managers instead of creative exploitation. At a number of plants cost accounting within the production entity has hardly been restructured at all, and it has not been brought right down to the individual worker.

Far from every manager of a VPO or GPO has become aware of the unalterable fact that from now on the prosperity of enterprise collectives will be determined not by knowing how to wangle easier plans or standards, but by the ability to organize and direct the collectives of shops and brigades toward discovery and all-out utilization of the potential within the economic entity.

The rather frequent appeals to the ministry for help in dealing with these matters, which must be dealt with locally, indicate that managers plainly have not gotten their bearings in the new economic mechanism.

The effort made at enterprises of VPO and GPO to remedy their financial condition was taken up at the end of 1987 in sessions of the branch commission for improvement of economic operation. The measures taken made it possible for most enterprises to have a normal financial situation before the transition to full cost accounting and self-financing.

The branch was able to settle old debts to USSR Gosbank in the amount of 250 million rubles with above-plan profit it earned; the number of enterprises operating at a planned loss was reduced, there were signs of more optimum use of resources earmarked for major repairs; and at most enterprises stocks of fuel and supplies did not exceed the planned level and were growing more slowly than the volume of production. Payment discipline had improved. As of 1 November 1987 delinquent indebtedness to suppliers and on bank loans was 11 percent lower than for the corresponding period of the previous year.

But it would have been premature to say that the financial situation in the branch made it possible for all enterprises to begin operation confidently under the new economic conditions. This had to be disturbing.

Shortcomings in the organization of production, breaches of technological discipline, and the failure of certain shops and machine complexes to fulfill production targets resulted in nonfulfillment of plans for deliveries based on orders (98.4 percent), and more than 350 million rubles in penalties were paid on that basis. Whereas the branch as a whole overfulfilled the profit plan by 170 million rubles, nearly one-fourth of the enterprises failed to fulfill profit plans for the first 11 months, falling short by 375 million rubles.

That represents the principal reason for the financial difficulties of enterprises today. Many plants of "Yuzhmetallurgprom" and "Soyuzspetsstal" are losing not only economic incentive funds, but also substantial amounts of working capital because of penalties. This is the main area of their economic activity.

Today the ministry's leadership has been compelled to take emergency measures to correct the financial condition of a number of enterprises, including such major ones as the Kommunarsk, Makeyevka, and Karaganda Metallurgical Combines, the Nikopol Tropical Pipe Plant, etc. But these measures are temporary and are unable to bring about a radical improvement of the financial condition of enterprises.

Unsatisfactory operation, uneven rate of shipment of products, and slow sales can mean late payment of wages to workers.

These shortcomings indicate that the causes of the financial complications do not lie solely in the payment of excessive penalties. For example, the Rustavi Metallurgical Plant has stayed within the planned amount of losses. Its debts amount to 26 million rubles. At the same time, remainders of metal in the form of work in process and finished products, amounting to 20 million rubles, have been exceeding the standard allowance for a long period of time. There has neither been the energy nor the desire to correct this situation either at the plant or in the association "Soyuztrubostal."

Unfortunately, the people in Rustavi are not alone. Today inventories of merchandise and supplies exceed the maximum level which has been set not only in "Soyuztrubostal," but also in "Soyuzspetsstal" and "Soyuzmetiz." All associations need to make yet another critical evaluation of what they have done and take the necessary steps to bring inventories into line with their planned size.

The situation with expenditure of resources for major repairs is disturbing. There has been a stream of letters from enterprises of "Yuzhmetallurgprom" requesting additional funds for major repairs. Enterprises of "Soyuzmetallurgprom" and "Soyuzspetsstal" have been joining in this "relay." They still seem to have a firm belief in their economic impunity for diversion of working capital to major repairs.

It is quite obvious that one cannot organize his effort in the old way now. Enterprises must have clear awareness that the branch will not be receiving additional funds either for major repairs or for replenishing working capital. But many enterprises, even all-union industrial associations and GPO ("Yuzhmetallurgprom," "Soyuzspetsstal," "Soyuzferrosplav," etc.) are counting on subsidies just as they did in the past.

Chermet UkSSR and Chermetremont [administrations of USSR Minchermet for capital construction and repairs, respectively] must join associations as soon as possible to determine sources of financing for reconstruction and major repairs of structures. The lack of clarity on this matter is holding back the drafting of financial plans at enterprises. It is also important to complete more rapidly the detailed determination of projects and construction sites covered by centralized capital investments so that their financing can begin.

There is also a need for solid improvement in the performance of the ministry's own administration. The branch is taking large losses because information is late or not reliable enough, and without it it is impossible to study the situation, to find solutions, and to organize their implementation. This has caused many bottlenecks at enterprises in the branch, advanced know-how and scientific discoveries are not being applied as they should be, and an analysis of results is used only for explanations and justifications, not to rectify the way things are going.

Some of the ministry's subdivisions have not yet become active participants in events developing at a swift pace, the influence of the branch economics institute is imperceptible, the performance of Chermetsnab as to the balance of physical resources has been poor, and Chermetremont has been timid in changing the repair system in order to make repairs less expensive. Nonproduction expenditures, especially in relations with builders and machinebuilders, are being brought down too slowly.

The year 1988 will be a problematical one for the branch. But the branch has a solid enough basis for coping successfully with the tasks of the year and of fulfilling the tasks placed before it, but the efforts of everyone must also be directed toward that.

It was noted in the course of the discussion that took place that not all enterprises in the branch are ready to make an immediate transition to the new economic conditions because a number of products are still being produced at a loss. There is a need for improvement in the pricing system and more precise definition of GOST's. The standard rates which have been set do not always guarantee self-financing of enterprises. A number of proposals were advanced for speeding up the transition to full cost accounting.

S.V. Kolpakov, minister of ferrous metallurgy, who made the concluding speech, emphasized that many, but not all the problems have been solved in connection with preparing for the transition to the new economic conditions. One of the most acute ones is revision of the normative standards. Some managers were not aware that the standards were worked out so as to take into account the 5-year plan as already formed, and do not reflect the desires of each us. Each of the managers must measure his own needs concerning the normative standards against the interests of the entire state and the priority of statewide tasks.

In and of themselves the economic norms do not guarantee any additional resources to an enterprise, but they do make it possible to take a different approach to the organization of production and to achieve a direct and immediate connection between performance and what is received as a result. There is no question that if the enterprise's interests are being infringed upon unjustifiably, the necessary adjustments should be made.

The setting of prices is a matter that is not by any means a simple one for the branch. There are still many deficiencies here. For example, rolled products which have been turned are less expensive than those which have not, heat-treated metal costs less at certain plants than the raw metal, and alloy metal less than ordinary metal. There are in fact many such examples. An effort is now being made to improve pricing, and any lapse in this matter could have an impact on the interests of certain collectives and the branch as a whole.

Another question is the introduction of intraplant cost accounting. Unfortunately, the system of cost accounting within the economic entity is not fully operative at a single enterprise today, not even the best. That is why the task of full-fledged introduction of accounting with the production unit and of bringing its basic principles to the awareness of every worker of the enterprise has been and remains one of the most urgent ones, and to a considerable degree its performance determines the success of operation as a whole under the new conditions.

At the end of the collegium's session the editors called upon A.I. Soroka, chief of the ministry's planning and economic administration, to tell about the effort to strengthen the branch's economic foundation before the transition to full cost accounting and self-financing.

[Question] Aleksandr Ivanovich, the transition to the new economic conditions presupposes that both the branch as a whole and also the enterprises making it up possess a sufficiently strong economic foundation for that. How do matters stand in the branch as to the profitability of production, is the share of products being produced at a loss high, and what is being undertaken so as to eliminate it altogether?

[Answer] The program for radical restructuring, which is aimed at speeding up retooling and at improvement of the economic effort in the branch, includes performance of measures to eliminate both the losses of enterprises and losses on individual products.

In 1987 the reasons why products were being produced at a loss were analyzed at all enterprises according to a specifically designed program, and organizational and technical measures were worked out to eliminate them. These measures were taken up in all-union industrial associations and in the ministry's working group. Schedules were established for reduction of the planned losses of enterprises and products.

The measures worked out are guaranteeing a reduction in the losses of enterprises. The number of enterprises operating at a loss is decreasing from 45 in 1986 to 13 in 1990. The number of products produced at a loss is being reduced correspondingly from 719 in 1986 to 183 in 1990, and the losses related to them from 530.3 million rubles to 282.7 million rubles, or 47 percent.

By and large the mining enterprises are still operating at a loss, primarily because of the continuing deterioration of the mining-geological conditions for extraction of minerals, especially in the region of the Krivoy Rog Basin; their retooling is being carried over to the 13th FYP.

The analysis of the reasons for operation at a loss showed that the largest amount of losses occurred because fixed productive capital and production capacities are not used effectively enough, attainment of rated capacity is slow, and the cost of newly installed equipment is also high. The cost of equipment, including imported equipment, has risen almost threefold over the last 10 years.

What is more, many projects are activated with serious deficiencies in their design, and sizable resources are spent to correct them; and attainment of the rated volume of production is slowing down.

Consumer rejections of improved-quality metal products have been having an adverse effect on the economic operation of enterprises. The efficiency of metal use is declining as a result.

In the 4th quarter of 1987 a check was run on fulfillment of the program for reduction of losses of certain enterprises, VPO, and GPO. According to preliminary data, the number of products being produced at a loss dropped to 500 in 1987, and the losses related to them dropped 57 million rubles, or 11 percent.

Correction of the losing operation of enterprises is an important problem, but that alone is not enough for their successful performance under the conditions of full cost

accounting. A profit of about 300 million rubles is required in this group of enterprises to cover the charge on fixed productive capital and to form economic incentive funds.

What is more, there are 47 enterprises operating at a low rate of profit in the branch; they are being financed out of the profit of those which have a high rate of profit. Programs for remedying their financial condition have been outlined so that this group might operate on the principles of self-financing in 1988; the programs pay much attention to introduction of the collective contract and brigade contract.

[Question] One of the most acute questions, one that has always aroused many disputes is the level of economic norms. How has this problem been solved in the branch, and specifically: what norms have been set for enterprises (individual norms or averages for the branch), do they guarantee sufficient satisfaction of the needs of enterprises, and how are the resources left at their disposition being distributed?

[Answer] As a matter of fact the establishment of economically sound norms and their levels has been one of the most acute problems in the transition of enterprises and organizations to full cost accounting. This is taking place in the context of a 5-year plan that has already been established, a plan that determines the planned proportions of profit, the total amounts of economic incentive funds, and the amounts of capital investments for each enterprise. The situation is compounded to a considerable extent by the lag that has occurred in capital construction in the first 2 years of the 5-year planning period because construction ministries failed to do the volume of construction and installation work called for and machinebuilders did not deliver all the equipment, while at the same time the limits of contract work, stocks for equipment and real sources of financing were not sufficient for a number of projects which were supposed to be activated in the period 1988-1990 according to the assignments of the 5-year plan.

The ministry's administration and all-union industrial associations have had to make an enormous effort to find optimum solutions for all these problems.

When the norms were being set, the approach to each enterprise was based on the principle of creating their equal responsibility for utilization of productive capital and labor resources and at the same time creation of the most equal possible motivation to increase profit over the targets of the 5-year plan. The rates of the charge on productive capital were differentiated as a function of the level of profitability, the total amount of profit obtained, and the status of fixed capital.

Yet it cannot be said that we have already managed to solve all the problems fully. There have also been complaints and requests from enterprises. The main ones

have been requests for increasing the transfers to the funds for social development and for development of science and technology from the levels envisaged in the 5-year plan.

In view of the substantial differences in technical adequacy of the enterprises in the branch, their geographic location, sources of raw materials and production structure, the ministry has been forced to undertake to establish individual rates for each enterprise. Adoption of uniform rates that would be the average for the branch would have in this case placed enterprises in unequal conditions.

The setting of the rates on the basis of the targets of the 5-year plan also resulted in different relations from enterprise to enterprise between the funds for development of production and for science and technology and the funds for social welfare development and material incentives. The share of the fund for development of production, science, and technology in the total amount of profit left at the disposition of the enterprise fluctuates substantially as a function of the volume of capital construction.

[Question] The plan for 1988 has already been compiled so as to take into account the new economic conditions. How has this effort gone in the branch, and what difficulties have arisen? To be specific, how were the state order and enterprise contracts distributed in the plan, does this distribution satisfy enterprise collectives, how is the supply of materials and equipment being organized to meet the contractual obligations of enterprises, and was success achieved in covering fulfillment of all orders of consumers? How are the problems of economic penalties being resolved?

[Answer] In connection with the transition of enterprises to full cost accounting and self-financing assignments were set for the first time in the branch's planning practice for the output of pig iron, steel, finished rolled products, and other products solely for delivery to enterprises of other branches. Targets for production of products intended for use within the branch are set by the ministry independently, and when they are to be used within the enterprise, they are set independently by the enterprise.

By contrast with previous years products will be delivered to consumers mainly on the basis of contracts which supplier enterprises conclude with consumers on the basis of limits issued by USSR Gosnab, rather than on the basis of orders from sales authorities, which must have a favorable impact toward fulfillment of product deliveries.

In spite of the ministry's objections, practically all metal products to be delivered outside the branch are included in the state order. This situation hampers the initiative

and independence of enterprises, takes away their maneuverability, and makes it more difficult to obtain additional profit and accordingly to augment incentive funds.

Since practically the entire output of ferrous metallurgy is sold at list prices, the level of its profitability does not depend on whether its output is delivered under the state order or under direct contract with the consumer. In 1987 the ministry's enterprises did not manage to fulfill the plan for volume of sales adjusted for fulfillment of contracts to deliver products, and products totaling 772.2 million rubles were not delivered. One of the reasons for the failure to fill orders of consumers was that certain enterprises and rolling mills did not fulfill the output plan.

Serious lapses on the part of authorities of USSR Gosnab in loading the enterprises of ferrous metallurgy with orders to deliver products in less than carload lots, shortcomings in the Conditions for Delivery of Ferrous Metals now in effect, interruptions in the operation of rail transportation, and at a number of enterprises the technical level of equipment as well, also had an adverse effect on deliveries.

At the present time a number of economic penalties have been abolished when the USSR Law on the State Enterprise (Association) took effect. But on the whole the system of penalties in effect in the country quite often places the parties in an unequal position: whereas enterprises are penalized in full for the slightest breaches of the obligations assumed, rail transportation, Minenergo, and construction organizations quite often get off, as they say, with a slight scare for similar violations. The funds obtained from them in the form of penalties offset to only a small degree the losses incurred by plants and combines. That is why restoring order in economic penalties is very important to guaranteeing operation in the context of full cost accounting.

[Question] In his speech during the session of the collegium S.V. Kolpakov, minister of ferrous metallurgy, dwelled specifically on the question of the pricing of the branch's products. This is quite understandable. Many unresolved problems have accumulated in this area. How are they being resolved?

[Answer] Wholesale prices of industrial products, including those of ferrous metallurgy, are now being reviewed, and improvement is taking place in relations between price levels of various types, grades, and shape-sizes so as to take into account their performance characteristics. The system of standardization in effect is being improved at the same time. Promising new standards governing ordinary quality steel, structural steel, and low-alloy steel have been prepared for approval that take into account the indicators of the quality of metal products actually attained.

The weakest link in the present pricing system is the insufficient development of additional payments for quality parameters of metal products. The consumer does not order metal products with the improved quality parameters, since he does not obtain any direct economic gain from their use, even though use of the products made from metal of improved quality does in fact yield a high benefit from the standpoint of the national economy. For instance, orders from consumers for 1988 fell short of what could be produced by 775,000 tons for low-alloy rolled products, 1 million tons of heat-treated steel, 42,500 tons of iron and alloy powders, and so on.

[Question] Now that we have mentioned technical improvement of products, how are the other problems of scientific-technical progress being dealt with in the branch of ferrous metallurgy?

[Answer] In conformity with the decree of the CPSU Central Committee and USSR Council of Ministers dated 18 August 1983 and entitled "On Measures To Speed up Scientific-Technical Progress in the National Economy," the basic directions for scientific-technical progress in the branch has called for accelerated development of outside-furnace processing and continuous casting of steel, heat treatment of rolled products through maximum utilization of existing capacities and activation of new ones, reconstruction of the principal blooming, section, sheet and plate, and pipe mills so as to furnish them up-to-date and highly productive finishing equipment, equipment for nondestructive monitoring, above all to improve the accuracy of geometric dimensions and the quality of the surface of the rolled product.

The ministry has set in place organizational and technical measures to make a radical change of the investment policy and technical policy for the branch's development. Provision was made to increase the share of funds for retooling in the total volume of productive capital investments to 52 percent and to double the scale of renewal of the active part of outdated fixed capital.

Specific measures for retooling and improvement of product quality were included in the 14 branch programs and 8 all-union target programs drafted by USSR Minchermet; they define a set of tasks for each enterprise, scientific research and project planning organization, and they establish personal responsibility of the ministry's key officials for performance of specific assignments and measures.

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#### **Petrochemical Industry Officials Discuss Profits, Normatives**

18200122b Moscow *PLANOVOYE KHOZYAYSTVO* in Russian No 3, Mar 88 pp 10-17

[Article by S. Polotskiy, chief, V. Zhelezov, deputy chief, both of the Main Economic Administration of USSR Minneftekhimprom, and R. Duniyushkina, laboratory chief of TsNIITeneftkhim: "Initial Results of the Branch's Operation"]

[Text] The course of the party toward introducing full cost accounting (*khozraschet*) and self-financing everywhere necessitates a thorough study of the initial experience with operation of enterprises under the new economic conditions. All the enterprises of USSR Minneftekhimprom, converted as of 1 January 1987 to full cost accounting using the cost-fighting indicator of net output, are actually operating according to the first economic model of the economic mechanism, which was envisaged by the Basic Premises of Radical Restructuring of Management of the Economy, adopted by the June (1987) Plenum of the CPSU Central Committee.

The "net output" indicator for measuring the dynamic behavior of labor productivity and formation of the wage fund was applied for the first time in domestic industry in the practice of planning and evaluating the economic performance of the ministry's enterprises.

The verification of the effectiveness of the new economic mechanism began under the problematical conditions of the 1st quarter of 1987, when the performance indicators of many enterprises were unsatisfactory. In the branch as a whole the delivery plan was fulfilled at a level of only 97.7 percent, the volume of the branch's production was at the level of the 1st quarter of the previous year, targets had not been met for the rise of labor productivity and reduction of production cost, and as a consequence the profit plan had been fulfilled at a level of only 90.8 percent.

All of this could be explained in terms of the effect of a number of circumstances, but the main thing was that petroleum refineries were operating in what is called the "mazut" mode, which sharply reduces the effectiveness of petroleum refining in the branch as a whole.

What is more, in certain regions there were interruptions in the supply of power to enterprises (enterprises in Kuybyshev Oblast suffered losses felt by USSR Minneftekhimprom). Output was not hauled away promptly in certain regions (Bashkiria, Belorussia, and the Ukraine).

Because of above-allowance inventories of raw materials, supplies, and uninstalled equipment, the lack of their own working capital, indebtedness to banks and suppliers, and for a number of other reasons many enterprises proved not to be prepared to operate under the new conditions, nor were they able to cope with the product quality requirements of state acceptance, which resulted in higher costs.

At the same time, the ministry firmly believed that such results were not in the least related to the adverse impact of the new economic mechanism. Relying on the constructive operating experience of more than 50 percent of the enterprises in the branch under the problematical conditions of the 1st quarter of 1987, the ministry's

collegium and all-union associations worked out measures to improve the operation of enterprises (associations), and their performance made it possible to stabilize the branch's operation. For instance, the lag that occurred last year in growth rates of industrial production and labor productivity was made up even by May. Indicators for production of the most important products have gradually evened out, which has made it possible to build a steady growth trend in fulfillment of the plan for product deliveries under contract from 97.7

percent in the 1st quarter to 99.1 percent for 1987 as a whole. Collectives have begun to realize, and this has been an important result of the new economic mechanism's effectiveness, that restructuring is unavoidable. Enterprises in the branch have begun a determined change of direction toward conservation of physical resources. Production cost has begun to drop as a consequence, while the profitability of production has begun to rise substantially. In the final analysis this has been reflected in the growth of profit and net output (see the table).

Dynamic Behavior of Principal Economic Indicators by Quarters of 1987

Indicator	I	II	III	IV	1987
Growth of net output:	98.6	108.0	106.5	113.4	106.7
Fulfillment of the plan	98.0	102.4	101.4	100.9	101.0
Reduction of the production cost of commodity output (+/-)	+0.29	-0.78	-1.05	-1.4	-1.0
Growth of profit:	93.9	107.4	110.5	126.7	108.0
Fulfillment of the plan	90.8	96.6	98.0	98.6	96.1
Growth of labor productivity:					
Relative to the plan	104.9	111.7	111.3	108.3	108.9
Relative to actual performance	100.0	110.0	108.7	115.3	108.5
Fulfillment of the plan	99.4	104.5	103.9	103.6	104.5
Sales adjusted for deliveries under contract (cumulative total from the beginning of the year)	97.7	98.5 (1st half)	98.7 (9 mos)	99.1 (yr)	99.1
Growth of commodity output (relative to the plan):	101.2	103.9	102.8	103.2	102.8
Fulfillment of the plan	99.3	101.3	100.7	101.0	100.4

Even in the 2d quarter of 1987 profit had risen 7.4 percent over the corresponding period of 1986 (while in the 1st quarter a drop of 6.1 percent had been observed), the growth in the 3d quarter was 10.5, and in the 4th 16.8 percent, so that it rose 8 percent for the year as a whole, while net output rose 6.7 percent.

The reduction of production cost and material costs guaranteed in the branch a growth of profit that exceeded the growth of commodity output (by more than fourfold), while the growth of net output exceeded it 3.5-fold.

The shortage of "own" working capital was reduced compared to the beginning of the year (to one-third), inventories of merchandise and supplies dropped against the planned level to a level below the standard allowance, the quantity of uninstalled equipment dropped 22 percent, including 33 percent for imported equipment.

For the first time in many years the branch managed to exceed the targets of the 5-year plan for the growth rates of the volume of production and labor productivity, while at the same time the number of industrial production personnel proper dropped almost 2 percent. The rise of labor productivity in terms of net output was 8.9 percent for the year, which exceeds by 4.6 percent the annual target of the 5-year plan.

But because of the immense penalties resulting from unsatisfactory performance of obligations related to

deliveries in the 1st quarter, the plan for balance-sheet profit was underfulfilled by 4 percent, and this had an impact on the funds of enterprises.

Based on the results for 1987, enterprises in the petroleum refining and petrochemical industry as a whole using the established rates for distribution of profit fell short 3.3 percent of the planned payments into the budget and 7.5 percent with their own economic incentive funds. According to our calculations, under the conditions that were previously in effect, had the results of operation been the same, the losses to incentive funds would have been one-fourth as great.

The conditions of full cost accounting objectively reflected the actual state of affairs and highlighted shortcomings in the operation of individual enterprises and also the oversights that occurred in shaping the plan and the fact that it was not sufficiently balanced against physical resources.

#### On the Standard Economic Rates Governing Distribution of Profit

One of the important economic instruments for increasing production efficiency under the new conditions are the stable, long-term standard economic rates governing distribution of profit. It is well-known that they were worked out for the 12th FYP on the basis of proportions and targets of a 5-year plan that had already been approved.

For USSR Minneftekhimprom as a whole the sum total of payments into the budget (in the form of the charge on productive capital and deductions from profit) amounts to 58.5 percent of profit over the period 1987-1990; 41.5 percent is left at the disposition of the branch for economic and social development. Out of that, 66.5 percent is earmarked for the fund for development of production, science, and technology, 24.1 percent for the fund for social development, and 9.4 percent for material incentive funds. The rates of the charge on productive capital have been differentiated from enterprise to enterprise from 2 to 12 percent. Moreover, for every enterprise they were set the same for each year of the 5-year planning period.

The rates of the deductions from profit paid into the state budget have also been differentiated from enterprise to enterprise. The ministry was unable to set them at the same level for every year of the 5-year planning period for all enterprises because of the uneven distribution of capital investments from year to year.

The sum total of payments to the ministry for 1987 amount to 19.7 percent of calculated profit. What is more, 24 percent of the sum total of depreciation intended for full replacement of fixed capital is centralized.

The ministry's centralized fund and reserves are to be committed to financing R&D projects and branchwide capital investments; subsidies to cover losses and build up economic incentive funds for enterprises operating at a planned loss or low rate of profit; repayment of long-term credit to USSR Srobybank and payment of interest on credit.

The subsidies to cover certain enterprises operating at a planned loss are dropping from 67 million rubles in 1987 to 8.1 million rubles by 1990. The task has been set in this connection of achieving complete elimination of losing enterprises by the end of the 5-year planning period.

The ministry has striven to guarantee all enterprises the same approach in working out the rates so that there would be no reduction of those planned funds anticipated under the previous conditions and so as to provide full financing for the activation of new capacity and facilities for social, cultural, and consumer services called for in the 5-year plan. Mainly the rates broken down to enterprises are meeting that requirement.

If we omit the deductions that go into the ministry's centralized fund, then the average share of calculated profit left at the distribution of enterprises is 37.5 percent. But at every enterprise that share is individual as a function of the size of profit, the established rate of the charge on productive capital, and the size of economic incentive funds assumed in calculations made in working out the rates. It would be ideal to set exactly the same rate for all enterprises so that they would have an

equal role as an incentive for increasing production efficiency. But the whole trouble is that they were worked out in the context of a 5-year plan that had already been approved and in which by no means equal rates of production had been envisaged for individual enterprises. For example, the production association "Omakshina" is under the plan for 1990 to increase the volume of production 7.7 percent over 1985, while for the association "Nizhnekamskshina" it is 39.8 percent. At the same time, resources exceeding the proportion of financing from all sources that was envisaged in calculations related to the 5-year plan could not be included in the rates.

The ministry feels that the tasks which have been set enterprises in the 5-year plan must be fully backed up with financial capabilities. That is why the rates are individual. For the ministry as a whole the share of calculated profit left at the disposition of 21 percent of the enterprises amounts to less than 30 percent.

There is no question that there is a certain unfairness in the individual rates, and this is especially manifested when the profit earned exceeds the assignments of the 5-year plan. Whoever sets aside a larger portion of profit for the needs of the government and the needs of the branch loses out. Accordingly, the issue has been repeatedly raised in the ministry of distributing additional profit in the current 5-year planning period in the form of a single tax—70 percent of the additional profit would be left at the disposition of enterprises. At the present time it is envisaged that beginning in 1988 and up through 1990 70 percent of above-plan profit would remain at the disposition of enterprises and would be committed at the established rates to augmenting economic incentive funds. But it is advisable to adopt this only for the conditions of the 12th FYP since later, when 5-year plans are shaped on the basis of scientifically sound standard economic rates, it will not be necessary to apply a special procedure for distribution of above-plan profit.

As for the 13th FYP, it is obvious that the form of the single tax must extend to the entire amount of profit. Moreover, the tasks facing enterprises must also be set on the basis of the principle of equal demands for economic growth. Equal opportunities must yield an equal return—that is the essence of the criterion for evaluation of the performance of enterprises in the new economic mechanism.

#### Operation of the Mechanism for Normative Distribution of Profit

The period of time in which the economic normatives have been used is short, but it is still possible to draw certain conclusions. First, the mechanism for their application does stimulate enterprises to increase production efficiency and does punish them for whatever mistakes they make in cost-accounting activity. Approximately 70 percent of enterprises which fulfilled and overfulfilled

the plan had profit exceeding the plan by 8.1 percent and transferred to their funds an additional 47 percent of above-plan profit, substantially increasing this amount over 1986; the other group of enterprises, which failed by 16.3 percent to fulfill the plan, fell 66 percent short in making payments to their funds, mainly because of the payment of penalties, and in a number of cases their funds were smaller than in 1986.

**Second, the impact of the economic normatives on economic activity of enterprises has to be evaluated in the context of all the conditions and elements of the economic mechanism. Our reference is to the following:**

- over the period 1987-1990, independently of the normatives, enterprises transferred to the budget no more than 30 percent of the profit obtained from supplements to wholesale prices for highly efficient products and products bearing the state Quality Emblem, and by decision of the ministry deductions from this profit will not be made to the centralized fund and reserves;
- when the delivery plan is fulfilled at a level of 100 percent, the material incentive fund is augmented by 15 percent;
- provision has been made for an additional incentive to be paid out of the reserve of the ministry on the basis of the results for the year in order to increase the output of consumer goods;
- enterprises operating with more penalties collected than paid retain all of this profit at their own disposition, and conversely, when they have paid out more than they have collected, funds are sharply reduced.

The results of operation of enterprises of USSR Minneftekhimprom in 1987 have shown that an additional 7 million rubles were transferred to economic incentive funds because of fulfillment of the delivery plan, 19.3 million rubles were transferred on the basis of supplements to prices on products bearing the Quality Emblem, and the net surplus of fines collected over fines paid amounted to 17 million rubles. At the same time, there was a shortfall of 105 million rubles paid in because penalties paid exceeded those collected.

The production association "Karagandarezinotekhnika," which on the basis of the normative was left 95 percent of its profit for its own disposition, and the shale refinery "Slantsy," which had a normative of 100 percent, when they fell substantially short of fulfilling the profit plan in 1987, lost to their funds amounts that exceeded the shortfall of profit. The losses would have been smaller if the rates of transfer from profit into economic incentive funds had been lower. Consequently, even such a rate not only does not rescue an enterprise that has been performing poorly, but on the contrary it punishes the enterprise still more.

The present procedure for distribution of profit has an impact on the economic condition of enterprises which have paid out more fines and penalties than they have

received. For instance, the association "Permnefteorgsintez," which earned above-plan profit from production, made additional transfers into the budget, but because it paid more than 6 million rubles in fines, it fell short about 5 million rubles in contributions to its own funds.

The PO "Bobruyskshina," the Tomsk Rubber Footwear Plant, the Krasnoyarsk Technical Rubber Products Plant, the Sumy PO "Rezinotekhnika," and a number of other enterprises, regardless of the rates, reduced their economic incentive funds by practically the entire amount of underfulfillment of the profit plan, since it was entirely related to the payment of fines.

Analysis has shown that this situation is the result of operation of the system of numerous economic penalties which came into being under the conditions of administrative management. The sum total of fines for the ministry in 1987 was 324 million rubles, including 193 million rubles for underdelivery of products to consumers. The difference by which fines paid out exceeded those collected, which was 174 million rubles, tended to diminish the profit left at the disposition of enterprises and correspondingly their economic incentive funds. Under the present system of fines, penalties, and forfeits, enterprises pay some of them for violation of assignments and obligations, which is economically justified.

At the same time, enterprises pay immense amounts of fines which do not affect the cost-accounting rights and interests of other enterprises. They represent about a third of all the penalties and under the conditions of the transition to full cost accounting they are having an adverse effect on the results of economic performance of enterprises.

The entire system of penalties, which were primarily introduced in connection with administrative methods of management and do not fit into the conditions of full cost accounting and self-financing, is accordingly in need of improvement.

The transition of enterprises to full cost accounting has made it more urgent to solve a number of problems which do not depend on their performance. This applies above all to problems of equal cost-accounting relations with the organizations and enterprises with which they do business. For example, enterprises of USSR Minneftekhimprom pay a fine that is tenfold the consumption when they exceed the electric power limit. But under current legislation those in the power industry are not required to reimburse a loss inflicted and they get off with only negligible fines.

Because of interruptions in the operation of a Minenergo TETs in the Kuybyshev Hydraulic Engineering System one of the largest production associations, "Kuybyshevnefteorgsintez," was left essentially bankrupt. Instead of

13.2 million rubles of profit for the association as a whole, there was a total loss of 18 million rubles, and Minenergo made compensation of only 2 million rubles in fines.

If financial aid had not been given, the PO "Kuybyshev-nefteorgsintez" would not have been able to credit a single ruble to economic incentive funds and the wage fund, nor would it have been able to settle accounts with suppliers and builders. Similar relations have come about with organizations of the Ministry of Railways, which are also exempted from making up losses.

That is why in the context of full cost accounting provision must be made for equal mutual liability of enterprises for the cost-accounting loss they inflict. The extent of this mutual liability must be determined by the suppliers and consumers themselves in concluding economic contracts, and should not be fixed in equal amount for all, as is the case today.

#### Experience in Use of the Net Output Indicator

Particular attention has been paid in USSR Minneftekhimprom to use of the net output indicator. Experience in the operation of enterprises indicates that this indicator reflects the change in the volume of production combined with a saving or overexpenditure of raw materials, supplies, and energy; the rise or drop in the level of utilization of fixed capital, and the saving or overexpenditure of labor resources on a per-worker basis.

For the ministry as a whole the volume of net output in 1987 increased 6.7 percent over the previous year. Moreover, whereas in the 1st quarter there was a 1.4-percent drop in net output instead of the planned growth, in the subsequent quarters a noticeable growth was achieved. It is interesting to note that the plan for the 1st quarter was fulfilled concerning labor productivity based on commodity output. Nevertheless, because production costs were allowed to rise and a substantial portion of the planned rise of efficiency in the 1st quarter was lost, the evaluation of labor productivity based on net output was objective.

In subsequent quarters the growth rate of labor productivity based on net output was higher than based on commodity output, threefold greater for the year as a whole. Again in this case the evaluation based on the net output indicator is effective, since production costs dropped almost 1 percent from the 1986 level.

The total growth of net output over 1987 was 6.7 percent, including a rise of 1.9 percent based on the rise in the volume of production, a 5.5-percent reduction of material costs. At the same time, because of worsening utilization of fixed capital, i.e., the faster growth of depreciation, it dropped 0.7 percent.

Thus for the first time in the practical operation of enterprises the dynamic behavior of the output-capital ratio is becoming an active factor influencing formation of funds for remuneration of labor. For example, 0.7 percent of the possible growth of net output was lost because the output-capital ratio in the ministry as a whole dropped in 1987, and that brought about a 0.3-percent reduction of the wage fund. It is not, of course, possible in such a short time to bring about a real improvement of utilization of fixed capital. But the very fact of the adverse influence of the faster growth of depreciation on the dynamic behavior of net output drew the attention of enterprise managers and forced them to think about the problems of the efficiency of new capital and the prices of equipment, and in the final analysis this has to bring about a corresponding rise in the output-capital ratio.

The use of net output objectively reflects the efficiency of our industry's development. This indicator's effectiveness depends on the rise in the efficiency of utilization of the raw material and supplies, above all that which is accomplished through intensification of the refining of petroleum, which rose 1 percent in 1987 over 1986. This means that by reducing the output of mazut the industry used the raw material for a corresponding increase in the production of motor fuels, coke, asphalt, and raw materials for the petrochemical industry. The yield of petroleum products from every ton of petroleum rose 2 percent for the year.

The principal advantage of the net output indicator lies in its cost-fighting attribute, and that is beginning to yield results. The reduction of material costs achieved in the branch in 1987 was the largest that has occurred in the last 10-15 years. In the 2d half of last year a rise in the output-capital ratio was noted for the first time.

#### On the Normative Method of Forming the Wage Fund

The wage fund of enterprises of USSR Minneftekhimprom is formed on the basis of rates applied to the growth of net output, which guarantees objectivity as to their "earning" the resources to remunerate labor. Whereas net output rose on the whole 6.7 percent in 1987, the growth of the wage fund was 2.7 percent. In enterprises which had a growth of net output it was equal to 3.7 percent, while in enterprises which had lower figures for this indicator, it dropped 2.2 percent from the base.

The normative method undoubtedly is yielding a constructive result. Whereas previously in planning the wage fund in terms of the number of workers and the average wage enterprises were reluctant to undertake a reduction in the size of their labor force, under the new conditions there is no reason for such fears.

For 1987 as a whole the number of industrial production personnel proper dropped almost 2 percent from the previous year at practically all enterprises. This is the result of the purposive effort to save on labor resources.

Analysis shows that a majority of enterprises were anxious not to lose the funds they had earned during the year, funds that safeguard them against unforeseen cases of interruptions in the future and above all for the transition to new wage rate and salary schedules. Even in the 1st half of 1987 this made it possible in 18 production associations and enterprises to begin the introduction of the new worker wage rates, which were increased by 20-25 percent, and the new salaries of managers, specialists, and employees, which were raised 30-35 percent.

By the end of the year the new conditions for remuneration had been introduced at 78 enterprises in the branch.

### Capital Construction

There has also been a substantial change in the attitude of enterprises toward the problems of capital construction, especially when it comes to building the facilities of the social sphere. At regional conferences held on the initiative of the chemical industry department of the CPSU Central Committee, many enterprise managers, shop chiefs, and brigade leaders presented proposals on development of the direct labor method and, most important, on development of the material and technical base for that method. Questions were asked about cooperative contribution of funds and resources of enterprises to create housing construction combines and brick-making plants to serve an entire complex. Some plants went on from words to deeds. For example, the PO "Kuybyshevnefteorgsintez" is making parts for housing construction, the PO "Permnefteorgsintez" has taken the brickyard on its own balance sheet, and so on.

But the possibilities of the rights which have been granted have not been correctly understood everywhere. Some managers feel that they can fail to acknowledge the assignments of the 5-year plan, using various excuses for postponing solution of the problems of building exceedingly important facilities.

USSR Minneftekhimprom has found centralized management of the investment process to be indispensable in the context of full cost accounting. To that end it is advisable to provide that financing be done as follows: on new construction—out of capital investments financed from the state budget; in the case of expansion of existing enterprises—from the centralized fund for development of production, science, and technology; in the case of reconstruction and retooling of existing enterprises—out of the profit left at the disposition of enterprises, i.e., the enterprise fund for development of production, science, and technology.

Thus creation of capacities of nationwide importance (the list covered by the state order) would mostly be placed under state control, but through the system of stable rates of deductions enterprise resources directly related to the final results of their activity would be used as a source of investment.

In the plan for total capital investments of USSR Minneftekhimprom over the period 1987-1990 new construction represents 4 percent, expansion of existing enterprises 52 percent, and reconstruction and retooling 44 percent.

### General Conclusions

Operating experience of enterprises of USSR Minneftekhimprom under the new economic conditions in 1987 indicates the effectiveness of the new economic mechanism and its great potential for awakening the human factor.

This has been vividly evident in the approach of the ministry's enterprises to drawing up the plan for 1988. The stable economic normatives were actually incentives for drafting strenuous plans, since they gave enterprises an opportunity to define strategies for achieving social goals set by the collectives.

For the ministry as a whole the planning indicators for 1988 corresponded to the targets of the 5-year plan. Under the previous operating conditions this correspondence between current and multiannual plans was not achieved.

A year of operating in the new way is a short time for fundamental conclusions; today it is still not possible to say that the new mechanism has already been formulated, it would be more correct to suppose that it is being created. And as in every fundamentally new thing, we have not been free of mistakes and critical objections from enterprise collectives.

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## INVESTMENT, PRICES, BUDGET, FINANCE

### Investment Policies in Ferrous Metallurgy Industry Analyzed

18200119 Kiev *EKONOMIKA SOVETSKOY UKRAINY*  
in Russian No 2, Feb 88 pp 40-43

[Article by S. Karpova, candidate of economic sciences, and A. Bratuta (Dnepropetrovsk): "Analysis and Planning of Effectiveness of Capital Investments in Ferrous Metallurgy"]

[Text] The policy of improving the economic mechanism places qualitatively new requirements on the system of planning and managing capital construction. These requirements are especially urgent in such a capital intensive sector as ferrous metallurgy, which is noted for long periods of planning, construction, and mastering of projects. An analysis of the practice of forming plans for capital investments in ferrous metallurgy indicates that they do not ensure in a fairly efficient manner an interaction of participants in the investment process in

solving problems of an overall nature both at the intersectorial level and within the sector. This leads to an unlinked commissioning of interrelated projects, which lowers the actual effectiveness of capital investments as compared with planned effectiveness.

For example, when the construction of an oxygen-converter shop at the Metallurgical Combine imeni F. E. Dzerzhinskiy was planned, the linked commissioning of technologically interconnected projects including the reconstruction of the combine's sintering blast-furnace conversion, reconstruction of the Northern Mining and Concentrating Combine, and construction of formcoke installations at the Bagleyskiy By-Product Coke Plant was not ensured. As a result, the planned technical and economic indicators of operation of the oxygen-converter shop have not been mastered for a long period. Such a situation was observed during the construction of the 2000 mill at the Cherepovets Metallurgical Combine, the 3600 mill at the Metallurgical Azovstal Combine, and a number of projects at mining and concentrating combines in the Krivoy Rog Iron Ore Basin.

Methodological directives for the planning of capital construction require that linkage in the commissioning of projects be strictly ensured when the enumerations and title lists of construction projects in five-year and annual plans are worked out. However, this requirement cannot be fulfilled always, because during the formation of the average-term sectorial plan for capital construction planning bodies, ensuring a balance of the commissioning of capacities in subsectors and conversions and in the reproduction structure of capital investments, cannot take into account the coordination of the periods for the beginning of construction and commissioning of linked projects. This is connected with the fact that individual start-up complexes and stages of construction of industrial enterprises, not a group of linked projects, appear as the plan's projects, for which title lists of construction jobs are worked out. Furthermore, a higher plan effectiveness, a bigger increase in output, and a shorter length of construction are the basic criteria when projects are included in enumerations and title lists of construction jobs and when the order of beginning of project construction and commissioning during the planned 5-year period is determined. Finally, the situation becomes aggravated in the process of realization of linked projects owing to the change in the economic situation connected with a reduction in the allocated limits of capital investments and material resources and in the level of fulfillment of plans for construction and installation work.

An overall solution of these problems can be ensured under the conditions of program oriented planning. At present this method has become widespread at the national economic level. Within the sector's framework its application is limited to scientific and technical programs. The narrow framework of application of this method is due to the lack of solution of a number of

important methodological problems and, in particular, determination of the demarcations of plans and overall programs as independent forms of planning.

The distinctive characteristic of the program approach lies in determining the composition of measures and order of their fulfillment for the attainment of a specific goal. Proceeding from this, any project of the plan can be considered the program's project. The plan coordinates the activity of the sector, association, and enterprise in realizing the group of independent goals facing these subdivisions. In connection with this any plan is a set of programs, in which the goal oriented and evaluation characteristics of these programs are reviewed with due regard for the system's goals and evaluation characteristics. The overall program also unites several programs. At the same time, their goal oriented and evaluation characteristics coincide, because these programs are oriented toward the attainment of the system's common goal. The method of planning overall programs is built on this theoretical basis.

It is recommended that by a goal oriented overall sectorial investment program we mean a planning document including a set of assignments and measures of an economic and organizational nature connected in terms of time, resources, and executors and directed toward a prompt commissioning and mastering of linked capacities with the required effectiveness and the solution of production problems facing the sector.

The following procedure of planning goal oriented overall sectorial investment programs in ferrous metallurgy is advisable.

The head elaborator of the sectorial development scheme (State Union Institute for the Planning of Metallurgical Plants) determines the composition and structure of overall investment programs, singling out in them head and linked projects of various subsectors and conversions and works out materials for substantiating the advisability of planning and realizing programs (periods of planning, construction, and commissioning of linked capacities, volume of capital investments, their utilization throughout the years of construction, composition of participants in the program, and so forth).

In schemes for the development and placement of ferrous metallurgy and investment sectors and in territorial schemes for the development and placement of productive forces it is necessary to single out the program part, on the basis of which overall sectorial programs, as the basic element in the planning of long-term, average-term, and annual plans for capital construction of clients and contractors, will be formed.

When working out drafts of overall investment programs, the USSR Ministry of Ferrous Metallurgy determines the composition of institutes working out these drafts (those that participated in working out the scheme for the sector's development) and entrusts the functions

of coordinating the work on the overall program to the head institute (State Union Institute for the Planning of Metallurgical Plants, Ukrainian Institute for the Planning of Metallurgical Plants, State Scientific Research and Planning Institute of the Metallurgical Industry, and so forth).

On the basis of the drafts of these programs administrations for capital construction of ministries with the enlistment of departments for capital construction of associations and enterprises work out a document of the overall program and title lists of individual projects. The document of the overall program must determine the composition of projects, commissioned capacities, executors, periods for the realization of the overall program and for the construction and commissioning of individual projects, plans for the delivery of equipment and mastering of construction and installation work, and indicators of effectiveness of the program as a whole and of its individual projects. Appropriate indicators for the program's projects should be singled out in the composition of indicators of the sectorial capital construction plan.

The introduction of new methods into the practice of planning capital investments, in turn, requires the development of adequate methods of evaluating investment measures. Integral methods should be used for evaluating the effectiveness of overall programs. Existing (point) methods, when indicators of the effectiveness of capital investments are calculated as the correlation of the entire volume of capital investments and of the annual effect, do not always give an objective evaluation. In particular, they do not make it possible to give an overall evaluation of programs including stages or start-up complexes commissioned synchronously or successively and do not take into account the changes in periods of construction and commissioning of projects, as well as technical and economic work indicators, which is especially important in calculations of actual effectiveness. Furthermore, the economic nonequivalence in time of both expenditures and results, which appear as different forms of circulation of capital investments, is not taken into account. Consideration of this nonequivalence has a significant effect on the value of the indicator of absolute effectiveness of overall investment programs, whose realization requires substantial capital investments. These shortcomings are inherent to a certain extent in all methods of determining integral effectiveness.

In the proposed method these shortcomings are eliminated in connection with the fact that it is recommended that the integral effect be calculated for the sectorial normative period of recovery of capital investments as the average annual during this time with due regard for the dates for the beginning of construction and commissioning of the goal realizing project set in the draft of the overall program. Furthermore, it is proposed that the profit from the commissioning of projects be taken into

account in the composition of the effect, as well as that the effect and expenditures be discounted by the method of compound interest with due regard for the lag of investments.

It is proposed that the coefficient of economic effectiveness of the overall investment program ( $Ye$ ) be determined according to the following formula:

$$E = \frac{3}{K^1}, \quad (1)$$

where  $Eh$  is the average annual effect from the realization of this program;  $K^1$  is the reduced sum of capital investments in the program, whose calculation can be written in the following manner:

$$K^1 = \sum_{z=1}^R \left( \sum_{i=Q_z}^{t_z} K_{zi} \cdot B^{T_i} \right) \cdot B^T, \quad (2)$$

where  $K_{zi}$  is the volume of capital investments of the  $z$  project during the  $i$  year of construction;  $z$  is the number of the program's project;  $i$  is the year of construction of the program's  $z$  project;  $Q_z$  is the moment of beginning of construction of the  $z$  project;  $t_z$  is the moment of commissioning of the  $z$  project;  $B = (1+B_{\alpha})^{-1}$  is the coefficient of reduction (discounting). In this case  $T_z$  and  $T$  are whole numbers, which can be written as the following expressions:

$$T_z < \frac{t_z - t}{\alpha}, \quad T < \frac{t - t_2}{\alpha},$$

where  $\alpha$  is the branch (norm) log of capital investments and  $t$  is the moment of commissioning of a goal-realizing project.

When the program's projects are commissioned earlier than the goal realizing project, from discounted capital investments it is necessary to deduct the effect (losses) obtained as a result of their utilization at the moment of commissioning of the overall program's final project.

The total effect from the profit ( $\Pi'$ ) is calculated according to the following formula:

$$\Pi' = \sum_{z=1}^R \sum_{j=t_z}^n \Pi_{zj} \cdot B^j, \quad (3)$$

where  $\Pi_{zj}$  is the volume of profit obtained from the  $z$  project during the  $j$  year of commissioning;  $j$  is the year of commissioning;  $n$  is the year when the normative period of commissioning ends. In this case  $e$  is a whole number and

$$e < \left\lfloor \frac{n - (j + 1)}{\alpha} \right\rfloor.$$

The total effect from renovation deductions ( $\Pi_r$ ) is determined according to the following formula:

$$\Pi_p = \sum_{s=1}^R \frac{s-(n+1)}{\sum_{i=1}^s} A_{zi} \cdot E_n \cdot B^s, \quad (4)$$

where  $A_{zi}$  is the volume of renovation deductions of the  $z$  volume during the  $j$  year of commissioning;  $E_n$  is the sectorial normative coefficient of absolute effectiveness of capital investments.

The average annual effect during the normed period of commissioning ( $E'$ ) is calculated as follows:

$$E' = \frac{\Pi_p + \Pi_r}{T_n} \quad (5)$$

In this case  $T_n$  is the normative period of commissioning and is equal to:

$$T_n = T_{ok} + T_{so},$$

where  $T_{ok}$  is the sectorial normative period of recovery of capital investments;  $T_{so}$  is the normative period of technical and economic mastering of the program's goal realizing volume.

For analyzing the actual indicators of effectiveness of goal oriented overall sectorial investment programs it is also necessary to sufficiently utilize the data on the actual recording kept at ferrous metallurgy enterprises. On the basis of developed methods an evaluation is given and an analysis is made of the actual effectiveness of capital investments utilized in a group of linked production projects, of which the oxygen-converter shop of the Metallurgical Combine imeni F. E. Dzerzhinskiy is goal realizing. The determined indicators of economic effectiveness of capital investments in linked production projects according to the plan (0.1259) and the report (-0.0121) indicate that capital investments have not been utilized effectively. The results of the analysis are presented in the table, which gives a quantitative evaluation of the disclosed factors affecting the effectiveness of the investment process in the group of linked projects of the overall investment program.

Balance of Factors in Deviation of Indicators of Actual Effectiveness from Planned Effectiveness

Factors	Deviation	
	absolute	relative (percent)
General deviation	-0.1271	-100.0
including as a result of:		
change in planned solutions	0.0014	-1.1
change in linkage in the commissioning of projects	-0.0466	-36.7
nonoverall commissioning of individual projects	-0.0336	-26.4
change in the length of periods for construction of individual projects	-0.0205	-16.1
change in technical and economic indicators of operation of individual projects	-0.0250	-19.7

The effect of linkage in the commissioning of technologically interrelated projects on the effectiveness of capital investments at times stood out in the practice of economic analysis. However, the conclusions on its significance were given indirectly through a quantitative evaluation of other factors, basically of the technical and economic mastering of projects. Under these conditions proper attention was not attached to the effect of this factor.

The performed calculations point to the need to take into account this factor in the planning of capital construction in ferrous metallurgy. Eliminating the effect of nonlinkage in the commissioning of projects and of other investigated factors on the effectiveness of utilization of capital investments requires both improving traditional methods of planning capital construction and ensuring an overall approach in planning the investment process of technologically connected projects, which can be ensured within the framework of goal oriented overall investment programs.

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## AGRO-ECONOMICS, POLICY, ORGANIZATION

### Regional Agricultural Newspapers Discuss Khozraschet

**Go-Ahead for Cost Accounting**  
18240065 Minsk SELSKAYA GAZETA in Russian  
11 Mar 88 p 2

[Article by N. Starovoytova, senior scientific worker of the BelNII (Belorussian Scientific Research Institute) of Economics and the Organization of Agriculture, candidate of economic sciences: "The Green Light for Cost Accounting"]

[Text] The draft of the Model Kolkhoz Directive has been presented for extensive assessment. It reflects the new stage in the development of kolkhoz structure and the improvement in production relations in the village, and reveals the necessity to solve specific problems related to the continued improvement of agricultural production under conditions of radical economic reform — complete cost accounting and self-financing production.

In connection with this the draft of the Model Kolkhoz Directive includes a number of essential additions and changes as compared to the current directive.

Thus, for example, in division one, "Goals and Duties of the Kolkhoz," it has been added that a "kolkhoz is a socialist agricultural enterprise that operates under conditions of complete independence and self-management, on the basis of democratic principles of management in conjunction with government direction." This means that the USSR Law on the State Enterprise (Association) applies to the kolkhoz as well.

The duties of the kolkhoz have expanded. It is added that "adherence to and improvement of the principles of kolkhoz self-direction, the overall development of kolkhoz democracy and the development of the necessary conditions for the full implementation and protection of the rights by statute and legal interests of kolkhoz members" belongs within the circle of the basic tasks of the kolkhoz. This addition is of exceptional importance and is directed at suppressing any attempts by higher-standing organs to interfere in the business of the kolkhoz and to ignore the basic law of kolkhoz life.

In the second division, "Membership in the Kolkhoz, the Rights and Obligations of Kolkhoz Membership," point 4 has been changed. Whereas in the existing directive, which was adopted in 1969, it is said that a kolkhoz member has the right to obtain work in the public enterprise of the kolkhoz with a guaranteed wage in accordance with the quality and quantity of work, the draft of the new directive states that he has the right "to obtain work in the public enterprise of a kolkhoz with wages in accordance with the quality and quantity of

work." What is the essence of the change? It has to do with the fact that the size of wages will depend only on the results of the collective's work and on the collective's own monetary resources.

Under conditions of self-financing this fundamental change is directed at not tolerating the attempt by some enterprises to live beyond their means.

The rights of kolkhozes have been expanded considerably as regards the selection of forms and systems for wage payments for all categories of workers. It has been stated that the kolkhoz independently determines the forms and conditions of wage payments (from gross income, for products produced or sold, for volume of work done, temporary wages and so forth).

With the goal of strengthening the material interest of management workers and specialists in the end results of kolkhoz operations the draft of the directive does away with strict centralization in stimulating their labor. It is stated that the forms and conditions for paying wages to the directors and specialists of a kolkhoz and its production subdivisions are to be determined by a general meeting of kolkhoz farmers.

Article 28 also emphasizes that the level of wages for kolkhoz members depends on the end results of management. Guaranteed wages for kolkhoz members are achieved by expanded reproduction and by achieving the planned net income. Such supplements and changes are especially important and rightful under conditions in which the kolkhoz is making a transition to self-financing production and are directed at strengthening cost accounting principles in wage payments as a fundamental part of allocation relations.

At the same time the draft of the Model Kolkhoz Directive did not find it necessary to illuminate the formation and distribution of public consumption funds as the second method for distributing material goods; the same is true for the savings fund.

In our opinion, in division 7, "The Distribution of Gross Production and Kolkhoz Income," article 38 should point to the necessity of developing funds for the development of production, science and technology, social development, material incentives, and so forth. In some articles of this division it is important to stipulate in detail the purpose of each of the aforementioned funds in the way this is done in the Law on the State Enterprise (Association).

For example, the kolkhoz utilizes the fund for the development of production, science and technology to finance scientific-research and experimental-design work, for renovating and expanding fixed capital on the basis of contemporary technology, for growth in its own working capital as well as for other purposes related to industrial development.

The social development fund is used for housing construction, for the overall strengthening of the material-technical base of the social and cultural sphere, for the upkeep of objects, for implementing health-related and mass cultural measures and for satisfying other social needs (the development of retirement security by means of the kolhoz's capital and so forth).

The fund for material incentives is used to pay out bonuses, rewards and other forms of incentives for labor, and to render material aid.

It is also important to state that the size of the aforementioned funds is determined according to the economic development of the enterprise and according to the correct ratio of consumption and savings funds, which must be directed at accelerating the pace of expanded reproduction and growth in the well-being of kolkhozes.

The introduction of such additions to the Model Kolhoz Directive and their implementation will encourage the improvement of the practice of distributing income in kolkhozes, which plays an important role under conditions of effective complete cost accounting.

#### **Economic Management Methods**

18240065 Tashkent SELSKAYA PRAVDA in Russian  
13 Feb 88 p 1

[Article: "Economic Methods of Cost Accounting"]

[Text] Among the most important directions in restructuring a special place is occupied by economics. The need for radical change within the entire system of operations relations is dictated by life itself, by the desire to eliminate the habit of administration, by bringing into action counter-expenditure factors. The goal, briefly stated, consists of awakening labor collectives to work better and live better on the capital they earn themselves, and of increasing the social activeness of a man of labor.

This work of great significance began with the April 1985 Plenum of the CPSU Central Committee. The many negative phenomena that hinder our movement forward were discussed sharply and openly in the party manner at the 27th party congress and the January and June 1987 plenums of the CPSU Central Committee. Gradually new experience is being accumulated, economic management methods are being developed and the area in which they are being used is expanding.

In accelerating economic development restructuring within the agro-industrial complex, the task of which is to provide dependable supplies of food and agricultural raw materials, is of enormous importance. Today there are considerable reserves for a continued increase in the pace within this branch. The directors and specialists of all spheres of the APK have not yet learned to efficiently utilize existing potential and to rapidly solve problems that may arise.

What such sluggishness and slowness leads to can be seen in the facts and figures presented at the 9th Plenum of the Central Committee of the Uzbek CP. Since the beginning of the five-year plan the shortfall in production has equalled almost 2.2 billion rubles. Growth in labor productivity in the public sector should have equalled 10.3 percent but actually comprised 3.8 percent, or three times less. The productivity of the irrigated hectare is extremely low; the development of livestock-raising remains extensive. The problems of accelerated development and effective use of the storage and processing base, the transition to a scientifically-based system of farming and livestock raising, intensive and water-conservation technologies and modern methods for the organization and reimbursement of labor are not being dealt with in the necessary manner.

This means that taking a course toward the active introduction of economic methods of management has not yet been reinforced with daily organizational work. Those responsible for this are first and foremost the organs of the republic's Gosagroprom [State Agro-Industrial Committee] and its numerous administrations and services which are responsible for the specific aspects of work. Labor collectives have poor support from local party and soviet organs. For this reason the transition to complete cost accounting and to various forms of collective contracts is proceeding slowly.

Unfortunately, in many enterprises we have not yet noticed that essential painstaking work that is directed at having an interested and competent caretaker for every field and crop-rotating field. But it is here that the calls for restructuring and acceleration must be supplemented with specific economic content; they should result in growth in labor productivity, in decreased and in a high return on the efforts and means that are contributed.

The workers of Surkhondarye have taken on a great responsibility today in deciding to make the transition in agro-industrial production to complete cost accounting, self-supporting production and self-financing. Are they ready for this? After all, in the oblast there are many enterprises and branches that are unprofitable and financially unstable. Weak collectives are already feeling the severity of the new conditions and an understandable uncertainty about their own strength. Our newspaper, which has taken over the sponsorship of the implementation of this large-scale experiment, expresses the hope that the difficulties of the first steps will be successfully eliminated, and feels that it is its task to propagandize in every way the experience that comes into being, to help kolkhozes, sovkhozes and oblast enterprises of the processing industry with an efficient and competent organization of operations. After all, that which is taking place today in the southern part of our republic will be the path that will have to be travelled by all other oblasts and the Karakalpak ASSR because the path to the transition to self-financing and self-supporting production is more promising; it is irreversible.

The practical experience of workers of the Surkhandarye agroprom and of many enterprises and brigades working in the new way is of historical significance, as we can say without exaggeration, and illuminates the path for tomorrow. This is why it is so important to attentively follow the course of this work and to scrupulously seek in the experience of the best enterprises simple, accessible and at the same time effective methods of economic growth and to note and more quickly eliminate the alien and the formal.

It is clear that the decisive factors in self-sustaining and highly profitable work include wages according to the specific contribution, i.e. a coefficient of labor participation for each participant in agro-industrial production; economic norms which do not infringe upon the interests of collectives that are operating well and which at the same time do not undermine the interests of the state budget; and halting extra indulgences to financially-unstable enterprises.

Effectiveness in cost-accounting relations cannot be achieved if contractual obligations are not mutually carried out completely and in a timely manner. On the one hand, this means material-technical supply of contract subdivisions as stipulated ahead of time according to contract; on the other hand, it means that whatever the members of the subdivisions have earned must be paid out to the last kopeck.

Party committees, directors and specialists of the agroprom must be provided with an economic education and practical experience in order to achieve a situation in which the production of products at any price will no longer be advantageous to anyone. Here we can orient ourselves toward the experience of the country's leading collectives where the evaluation of labor collectives is based on the most objective index — gross income. This is the cost of gross production with the deduction of material expenditures for this production. This index very precisely reflects the economic development of every enterprise because it is used to form wage funds, the public consumption fund, the savings fund; also payments and dues are paid out of it. Gross income is the basic source for expanded reproduction and for the satisfaction of socio-cultural and consumer needs of village residents.

The very important questions standing before us cannot be solved without increasing the training of cadres of specialists and workers of the mass professions, without the continued expansion of democratic beginnings within the sphere of management of agro-industrial production. Prior to the transition to economic methods of operation some people, and even directors, got away with not having a certain competency in these areas because they were able to make assurances that were sufficiently loud; today it is possible to go bankrupt in this manner. This is why now a special role belongs to economic general education, why a task is being established to have all APK workers systematically and on a

daily basis study the special features of intensive technologies, collective and family contracts, cost accounting and the principles of self-financing and self-supporting production.

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#### Private Plot Production Discussed in Belorussia

Meeting of BSSR Private Plot Commission  
18240064 Minsk SELSKAYA GAZETA in Russian  
19 Mar 88 p 2

[Article by P. Stasevich, special correspondent for SELSKAYA GAZETA: "Not Putting Off Until Tomorrow/ Reportage from a Meeting of the Republic Commission on the Development of the Private Plots of Citizens"]

[Text] It is not the first time that the author of this article has attended this commission's meetings. There is always a serious conversation with the directors of those rayons, village soviets and enterprises where there have been considerable lags in development that directly related to the fulfillment of the Food Program. The main conclusion one draws from attending such meetings is this: While recognizing in word the necessity for all types of concern about the development of private plots, local directors and specialists on whom the implementation of this work depends to a decisive degree, continue to regard this as of second priority. The amount of attention given to this aspect of work reflects this attitude and the most modest successes are looked upon with satisfaction.

Here for the umpteenth time a problem was brought up for examination at the meeting, which was being conducted by the chairman, V. A. Mikulich, who is also the Deputy Chairman of the Presidium of the BSSR Supreme Soviet. At first glance it appeared that the topic had to do with a region successful in the administration of the private plot — "On the Measures being Taken by the Rubilkovskiy Village Soviet of People's Deputies of Dzerzhinskiy Rayon to Stimulate the Production of Meat, Milk, Potatoes, Vegetables and Other Agricultural Products in the Private Plots of Citizens."

At first the successes were confirmed by several figures. For example, last year Pravda and Komintern kolkhozes, which are located on the territory of the soviet, provided the population with 498 tons of hay (1.4 tons per head of cattle), 328 tons of feed root crops, 231 tons of grain forage, 40 tons of seed potatoes and 1,000 tons of organic fertilizers, and the demand for seed of grain crops and perennial grasses has been satisfied. One hundred sixty four hectares of plowland have been allocated for pasturing livestock, including 77 hectares of cultivated and improved lands. Aid is provided for cultivating farm plots. Twenty four head of cattle and 638 piglets have been sold and replaced to meet the needs of the population. Other questions involving rendering aid to kolkhoz farmers are being dealt with.

This enables many private enterprises to increase livestock production output and to increase the sale of surplus milk and meat.

It is understandable that in the report of A. Borovik, ispolkom chairman of the Rubilkovskiy Village Soviet, as well as in the explanations of Ye. Shikulo, chairman of the Dzerzhinskiy Rayon ispolkom, of P. Furs and P. Botyanovskiy, directors of the Pravda and Komintern kolkhozes, these were the figures that were pointed to.

However, as was emphasized at the commission meeting, today we cannot be satisfied with beginning successes; an extensive breakthrough, as they say, is important in the development of the private plots of citizens. And this is exactly what is absent in the Rubilkovskiy and in many other of the republic's village soviets. Moreover, often it happens that as far as this matter is concerned things do not just stand still but actually take a step backward. Incidentally, the figures speak eloquently of this. Whereas last year gross agricultural production output in the public sector comprised over 106 percent as compared to the 1986 level, the return from private plots decreased by 15 percent! In other words, it turns out that we have the following type of situation — the better the public sector operates the more indifferent local managers are to the concerns of the private plot holder. This is a very undesirable tendency that "eats away" at the total growth in the production of agricultural products.

For the sake of comparison I would like to present the data for neighboring Lithuania which was presented at the commission meeting. In this republic in many rayons 50 percent of the milk and meat produced is bought from the population. This information is for the purpose of reflection and a call to action. We understand without spelling it out that in order to achieve this kind of support from private plots the Lithuanians provide private plots with a strong shoulder to lean on through specific actions and not simply on paper.

What are things like in our Rubilkovskiy Village Soviet, for example? Alas, there is a long road to travel before a satisfying picture is reached; the possibilities of the private plot for increasing agricultural production output are utilized inadequately. Let us again look at the facts.

As before, little feed is allocated for livestock that is being raised on private plots. Only 1.4 tons of hay has been allocated per head of cattle. In Komintern Kolkhoz 56 tons fewer were allocated than in 1986. The population's demand for grain forage is not being satisfied. In Pravda Kolkhoz 155 tons have been allocated (4.6 percent of gross yield), and in Komintern Kolkhoz — 76 tons (1.8 percent) instead of the 10 percent established by a resolution of the BSSR Council of Ministers. It is

essential to allocate cultivated pastures for the pasturing of livestock being raised privately by citizens, but in Komintern Kolkhoz the area of such pastures decreased by 20 hectares in 1987.

The supply of piglets and chicks to the population is "limping along." In 1987 the sale of piglets decreased. The supply of young fowl for the population was not organized properly. Village residents must travel to the markets in Minsk to acquire it.

And having bought the young animals, the troubles are not over. The barns built near apartment houses are usually very small, which makes it difficult to raise livestock, especially cattle. In enterprises of villages which are distant from the central farmstead there is a shortage of work horses for cultivating farm plots. There is no raising of cattle and hogs on private plots according to contracts.

According to the data from farm inspections conducted by the commission of the village soviet, 212 families (43 percent) did not raise cows, including in Pravda Kolkhoz — 98 families (42 percent) and in Komintern Kolkhoz — 114 families (43.5 percent).

The peasant is an excellent economist. But in some places some individuals have tried to dispute this truth, dealing with the development of private plots either by placing a clamp on them or by calling for them without conviction. Today these kinds of tactics will not work. Especially if we consider how long private plots took a back seat to common concerns. For this reason we must now place emphasis on the economic interest of village residents in the development of the private plot. This means that incentives in this important matter must be in full force, and that an individual must be completely sure that there will be no problems with receiving forage or with the delivery of grown animals. This is especially true today, when the decisions of the party and government have removed many of the unfounded limitations on having private plots.

For this reason I feel that the members of the republic commission are 100 percent correct in deciding to toughen the initial draft of the resolution on Rubilkovskiy Village Soviet. The transition from words to deed should have been made long ago. Despite the difficulty of the problems it is necessary not to look for justifications but to find specific solutions for the stable development of the private plots of citizens.

We will hope for the latter.

**BSSR Gosagroprom Meeting**  
18240064 Minsk SELSKOYE KHOZYAYSTVO  
BELORUSSII in Russian No 10, Oct 87 p 31

[Untitled article]

[Text] The BSSR State Agro-Industrial Committee has assessed the work of Belkoopsoyuz (Belorussian Cooperative Union) as regards increasing the procurement and

processing of agricultural raw materials and the more complete satisfaction of the population's demand for food products. The resolution that was passed noted that Belkoopsoyuz still has not achieved a radical restructuring in the operations of oblist and rayon potreboyuzes [union of consumers' societies] and raypo's [rayon consumers' societies]. Here capacities for the procurement, storage and processing of agricultural raw materials are increasing slowly. The necessary attention is not being given to the effective use of existing equipment; the tasks relating to opening reception-procurement points and to increasing capacities for producing canned goods are not being carried out. The organization of trade and public nutrition in the village does not meet today's needs. The demand for many goods is constantly not satisfied. The necessary order has not been introduced in the organization of procurement from the population of livestock and fowl, vegetables, fruit and other agricultural products.

The resolution that was passed establishes a specific program of operations for cooperative organizations, agro-industrial committees and associations within the republic as regards eliminating existing shortcomings in their work, the maximum increase in the procurement and processing of agricultural products, and the more complete utilization of local raw-materials resources on the basis of the continued strengthening of economic ties with kolkhozes, sovkhozes, the population with private plots and with horticultural partnerships.

Cooperative organizations have been assigned the task of concluding contracts beginning in 1987 with all private enterprises having marketable products for the procurement of surplus, of increasing the network of seasonal reception-procurement points, of staffing them with cadres and of supplying them with packing and packaging materials.

With the goal of increasing the interest of citizens to sell the surplus products they produce, Belkoopsoyuz and its organizations have been given the assignment to organize local counter-sales to these citizens of products that are in high demand, garden and orchard supplies, fertilizers, and building and other materials.

The oblast's agro-industrial committees have been given the task of opening firm stores at kolkhoz markets and kolkhoz and sovkhoz kiosks as well as a retail network of fruit and vegetable markets, of shipping agricultural products to them, of selling the population sowing materials for vegetables, fruits and berries, as well as domesticated animals and fowl, grain forage, and coarse and succulent feeds.

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## Obstacles to Subsidiary Enterprise Production

SOVETSKAYA ROSSIYA Article  
18240066a Moscow SOVETSKAYA ROSSIYA in  
Russian 17 Feb 88 p 1

[Article by Yevgeniy Kotyayev: "The Subsidiary Enterprise In the Confusion of Prohibitions"]

[Text] When subsidiary enterprises were being developed it seemed that they would be a temporary measure. Today cost accounting is gaining more and more strength, pushing each individual to do his job. So, hasn't the time come? Isn't it time to look critically at the existence of subsidiary enterprises? Economic laws will sooner or later claim their own anyway. Then sooner is better — there will be fewer losses. [Signed] V. Melnikov, Kursk.

Many people feel the same way. I remember that just saying the word "subsidiary" was enough to spoil the mood of my acquaintance, the director of a fairly large and prospering enterprise. The addition to the worker's table, as the products of subsidiary plots were called, so often clashed with expenditures that it was more advantageous to take people out to restaurants.

A respectable amount of time has passed since then. Many directors have seriously undertaken agricultural matters. They have acquired helpers in agricultural production and can carry out discussions with agronomists on equal terms — the period of apprenticeship appears to have passed. Yet the results are not pleasing. If you leaf through the book which was created by the oblast planning association on the results of the past year you see that the list of subsidiary enterprises is large — almost 200 of them in Kursk Oblast without including small ones, and pluses are extremely rare. Mainly we find losses. And the losses are considerable — in the millions.

This, according to the admission of managers, is only the tip of the iceberg. A significant portion of expenditures related to the upkeep of subsidiaries, bypassing cunning paragraphs of the instructions, are scattered through other items in order to later settle in the item on production cost of fixed production.

The other symptom confirming the conclusion of the letter's author is the decreased interest in subsidiary plots. Whereas during the last five-year plan an average of 73 percent of resources allocated for their development were assimilated, during the first year of the current plan, despite energetic calls on the part of the local leadership only one-sixth were assimilated. Last year things were little better. Here and there it was possible to come across "temporarily" closed old as well as "frozen" or hardly heated new agricultural shops.

But in this case how do we explain the existence of profitable subsidiary enterprises? And the losses of unprofitable subsidiaries — can a fatal economic law be blamed for this? For example, we have the Kursk Food

Combine. The subsidiary exists under ideal conditions — there is land surrounding the enterprise, the envy of grain farmers, various production wastes are free, but the business is no good — cattle plague, large expenses and losses. The reason is the chronic needs of the subsidiary enterprise. Long ago the electrical heating elements burned out hopelessly, the water line broke down and the electrical line is being maintained only as a point of honor.

We can cite many examples similar to this one, but explaining the lack of attention to subsidiaries just as honest mistakes or as the measure of responsibility of particular directors would be a simplification. In the final analysis the laws — here the letter's author is absolutely correct — make the ultimate decision. The only question is — what are these laws and what do they decide?

Let us try to delve into this by using a specific example.

The Srednestatisticheskoye is the subsidiary enterprise of Leskhoz mash Plant located in the rayon center of Dmitriyev-Lgovskiy. There is a quality pigpen for 500 head, a feed kitchen, a feed storehouse and offices. Plant director D. Fragin shows us his enterprise not without pride — here the upkeep stalls are special, the supporting designs are original and sows cannot be compared to kolkhoz sows. But there is nothing to feed these animals.

"We are not given any land," laments David Izrailevich. "How many years have we been struggling."

Land. Probably of all hindrances on the path toward increasing the effectiveness of subsidiary enterprises this is the main one. A survey of a number of oblasts of the RSFSR showed that the majority of subsidiary enterprises suffer from a shortage of land. Twelve percent of them have none at all. In Kursk Oblast the situation is even worse. And this even though it appears that no one is refusing to allocate land.

"We," said the first deputy chairman of Dmitriyevskiy Rayispolkom [Rayon executive committee], N. Strelkov, "of course know that it is difficult for the Leskhoz mash subsidiary without land, and are thinking about how to help. There is this idea, for example — to give it 100 hectares of beets. Whatever they grow over 300 quintals per hectare is theirs."

It was obvious that Nikolay Grigoryevich considers this variant extremely advantageous for the Leskhoz mash workers. Nevertheless that "abundance" has played a great dirty trick — the average yield is 200 quintals per hectare in the region. We can hardly count on the farmers hurrying to cultivate the soil under such conditions.

The subsidiary enterprise is firmly caught between "advantageous" and "necessary" and cannot move either forward or back. Unification of these concepts is

hindered, in addition to other things, by departmentalism, which appears under the banner of concern for state interests. For example, the enterprise is allocated land, but the land is burdened by millions in debts which those enterprises preceding us — kolkhozes and sovkhoses — managed to accumulate. When this type of variant was proposed to the Kursk GRZ-20, it naturally refused it.

The attempt to transfer kolkhoz and sovkhos debts to industry became a serious hindrance on the path toward the subsidiary's transition from the category of handicraft "manufacturing" into the category of solid agricultural enterprise. Bargaining continues on for years. The oblispolkom accuses the representatives of industry of stinginess, while industry points to cost accounting.

The oblispolkom is not exaggerating this haggling: it attests to the fact the directors do not believe in the possibilities of subsidiary enterprises. This is why they place impediments in the way of subsidiaries instead of helping in their development — the debts belong to the agroprom, it should repay them, there can be no other decision here. As for the shortage of land, we must still investigate how it developed and whether it is as large as it appears to many. After all in many enterprises yields do not even justify those expenditures which they required. We may wonder whether there is any point in continuing to trust the land to such enterprises. Wouldn't it be better to hand over even a portion of the fields to those who will know how to utilize it effectively?

Indexes. One other question. Regardless of the quantity an enterprise produces in its subsidiary enterprises, this still "does not count" since it is not included in the rayon and oblast balance line. A problem rightfully arises — today only deliveries into the national fund are planned for oblasts. What about the rest, is it an internal matter? Yes, answer the APK and Goskomstat [State Statistics Committee], but the sales plan remains in effect for the region. For this reason, they say, no rayispolkom will go for the transfer of land, even with a "recumbent" enterprise — even though such an enterprise produces crumbs it still means an addition to the plan...

The unreasonableness of the situation that has developed, and it is characteristic for most of the regions of Russia, is understood by all — by APK workers, by rayon directors and by potential "adopters" of kolkhozes. However, things are not moving past talks because an obsolete habit that has not yet lost its power — looking at life through indexes — is the hindrance.

The sales plan is stable. But is this so? We, they answered to my telephone call to the management of the agro-industrial complex of the RSFSR Goskomstat, at first had no intention of carrying out bookkeeping regarding the sale of agricultural products. But then they decided to continue this after all without providing any kind of assessment. As for crediting the products produced by subsidiaries, this there is evidently reason to do. But no one turned to the statistics concerning this subject...

As you can see, even this purely bureaucratic problem can be solved in principle; it is simply that no one has attempted to do so. Everyone is too timid to even pose this problem although the situation has changed greatly. The work of the agro-industrial complex of any oblast will now be judged not by some kind of standard percentage but by how it manages deliveries into the national and republic funds. It will also be evaluated by the condition of the food stores, and by the quantity of food products produced locally and consumed by oblast residents.

Full development of subsidiaries is being hindered by the propensity to solve complex economic problems using the customary power methods. Cost accounting reveals the inconsistency of these methods, but in its nature it cannot conflict with that which is advantageous, and the author of the letter with which we began the discussion is not right when he states that cost accounting and the subsidiary enterprise are enemies. Subsidiary enterprises can and must become advantageous as well as profitable if we approach their development creatively with a consideration of all local characteristics and possibilities. Both the government and all of us, consumers of food products, will be the winners.

#### TRUD Article

18240066b Moscow TRUD in Russian 20 Mar 88 p 2

[Article by inspection raid members N. Pogodayeva, N. Bashkatov, S. Grimov, A. Logvinov and Yu. Kotlyarov: "The Legal Six Hundredths/ What is Hindering the Allocation of Land for Orchards and Gardens"]

[Text] For many city dwellers this spring is special — finally their dream to become gardeners will be realized. And in order to make it a reality in the near future for all those who wish it we must, as the statistics say, allocate a million and more plots annually. Our correspondents were given the assignment to find out how this problem is actually being solved.

Three fourths of the Turkmen SSR's area is covered by the sands of the Karakum Desert. This is why every tree, every shrub and every blade of grass is of great value. The aspiration of city dwellers to have even a small plot of land, which they are ready to transform into a blossoming garden, is understandable.

For many years almost no land was allocated in the republic for collective orchards and vegetable gardens. At the beginning of this year, according to Turkmensovprof [Turkmen Trade Union Council], there were only 248 orchard-garden partnerships unifying a little more than 13,000 people. At the same time, according to data from the Ashkhabad Voluntary Society of Horticulturists, in the capital alone there are 30,000 people in line to receive plots.

Nevertheless, in 1986 the republic's Sovmin [Council of Ministers] passed a resolution according to which it is planned to allocate 1,500 plots annually (including only 800 for the residents of Ashkhabad). It turns out then that a solution to the problem has been delayed 10 years?

Perhaps there is a shortage of land?

"No, that's not it. There is enough land to satisfy all the demand for plots," says A. Orazmukhamedov, instructor at Turkmensovprof.

What is the problem? How can we explain that even this "abbreviated" resolution is not being fulfilled? Last year in the republic instead of 1,500 only 857 families received plots, and residents of the capital did not receive a single (!) plot. The question of allocating 1,000 hectares of land was hashed out for an entire year.

Only 17 organizations and enterprises will receive plots this spring. Among these there is only one plant — Turkmenkabel; the remainder include the Turkmen Gosagroprom [State Agro-Industrial Committee], the Ministry of Internal Affairs, the republic's Gosnab [State Supply Organization], Minbyt [Ministry of Consumer Services] and so on. This is a strange adherence to the principle of social justice. In the final analysis, we have the right to an order of priority!

"It does not exist, this order of priority," said V. Babenko, acting chairman of the Ashkhabadskoye Society of Horticulturists. "Although the orders seemed to have been registered a list of succession was not set up."

Confusion and muddle, various types of conjecture and rumors will hardly help to solve the problem. On the other hand the soil is ripe for various types of abuse and conflicts. Already today plots received by city dwellers are being sown with seed...of future discord. What will grow?...

"It looks like we'll never become gardeners," says V. Danilov, engineer of the trust, Rostovtruboprovodstroy [Rostov Trust for Pipeline Construction], bitterly. "We were allocated some land in Shchepkinskiy Sovkhoz, but what kind? There is not even a bridge across the river; during the floods in the spring it is impossible to reach the plots. We had to turn them down..."

Recently the collectives of many enterprises of Rostov, with its population of 1 million, has turned down the allocated plots. The reason is the same — unsuitable variants are proposed. The problem is that the approach to the development of horticulture in the Don region remains formal, as before. It is no accident that the number of horticulturists decreased by 19,000 between 1980 and 1986. It is true that recently it increased to 27,000, but for a city with 1 million this is a drop in the bucket.

In the course of the raid we came across cases of thoughtless destruction of existing orchards. For example, in January 1980 Rostov gorispolkom allocated some land to the Rostov Chemical Production Association for the building of a vocational-technical institute, having taken this land from the Za Mir Horticulturalist Partnership.

With one stroke of the pen 160 plots were taken from gardeners. The association paid the former owners of the gardens about 170,000 rubles but has not built anything yet. Isn't this muddling?

The fertile lands that have been rendered inhabitable have been empty for almost 10 years. The present gorispolkom administration is not at all hurrying to give approval for the temporary use of these lands. On the one hand we develop horticulture, on the other — we destroy it. Such are the bureaucratic intrigues...

It is not the first year that horticulturists-amateurs of the Kemerovo Auto Base, together with their trade-union committee are toiling while "beating out" 10 hectares of land for plots. First the sovkhozes demanded building materials from them in exchange for land, then the rayon and city executive committees brought out the red tape, proposing variants that were known to be unsuitable for people.

Is it just the auto workers who are experiencing such difficulties? According to the data of oblsoprof [oblast trade union council], by August of last year in Kemerovo alone 3,868 families were waiting 1.5-2 years for the allocation of land. The situation was no better in Novokuznetsk, Osinniki, Myski and a number of other cities. In the oblast over 9,000 people want plots.

Last year the situation seemed to have improved — as planned, 40 partnerships arose. But this is "in general and on the whole." In Mezhdurechensk instead of the expected 800 plots only 510 were received, in Prokopyevsk — 192 instead of 450, and so on. Add to this the debts of past years that were not repaid. As a result, only 60 percent of those who want them today have the opportunity to devote their efforts to the garden in Kuzbass. In Kemerovo, Prokopyevsk and Leninsk-Kuznetsk the figure is even smaller.

Perhaps all of the suitable land is already completely occupied? Nothing of the sort. The main reason for all this disorder, according to the general consensus, until recently has been the absence of confirmed, well-founded schemes for distributing collective gardens with a consideration of the future. These schemes exist for today. But a new impediment has arisen. On the plot allocated to the partnership it is impossible to even hammer a peg without a government document on land use — that is the system. The Kemerovo affiliate of Zapsibgiprozem [Western Siberian state land planning institute] must prepare the document.

"We cannot even begin filing requests before 1990," says I. Onishchenko, the affiliate's director, with despair. "We are extremely overloaded with urgent state orders and there aren't enough specialists."

But recently such problems did not arise. Among RAPO land managers there were small cost-accounting groups in operation which fulfilled such types of orders of gardeners. This was done rapidly, without being nerve-racking. But evidently someone within RSFSR Gosagroprom thought this system was too simple, and in March 1986 Order Number 176 appeared, in accordance with which these RAPO groups were transferred to Giprozem [State land planning institute].

In this way, the small Giprozem unwillingly became the unexpected and still the insurmountable hindrance on the path of gardeners toward a desired and already allocated plot.

How can this hindrance be eliminated? How can other no less difficult problems be solved? The oblast ispolkom puts the blame on the agroprom and says it is the agroprom's business. But in the agroprom all nine (!) deputies of chairman V. Dikunov refused to have anything to do with horticulture concerns, stating, "This is not my job description." In the oblsoprof after the elimination of the agroprom [agroindustrial association] division horticulture and gardening were assigned to an instructor of zhilbytodel [Housing and consumer department], who has other responsibilities in addition to this one.

With this kind of separateness, gardeners essentially found themselves in the position of homeless children. Meanwhile, in neighboring oblasts as for example Tomsk Oblast, the oblsapolkom deputy chairman is directly responsible for horticulture. And this, of course, is only for the good. It is time for the administration of Kuzbass to stop looking upon the problems of gardeners from on high as tertiary problems.

[From the editors] We chose the addresses for the raid purposefully. Last year's assignment regarding growth in the number of garden plots in the Turkmen SSR was fulfilled by only 40 percent, and in Kemerovo Oblast — 35 percent. In general, this assignment was not fulfilled by three union republics and 39 kraya, oblasts and autonomous republics. There is no justification for such slowness in dealing with an urgent social problem — there is sufficient land everywhere. There is a shortage of competence and a business-like attitude and just of interest.

The situation that is developing in Rostov Oblast is also very alarming. According to accounts everything is completely in order here — the quota on the allocation of plots has been fulfilled by 205 (!) percent. This percentomania often turns into a formalism, into work for a jackdaw, but not for people who simply reject such "above-plant" which are unsuitable for the cultivation of

plots that are hard to reach. This example forces us to look with a certain degree of doubt at another favorable figure — 1,143,000 plots. This is the number allocated throughout the country in 1987, i.e. 93,000 more than the plan. And don't let it turn the head of those who are responsible for the development of horticulture. After

all, the main goal is not the numbers but a real possibility for every individual who wishes to become involved in this good deed to do so. And this is exactly what is often missing.

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## GOODS PRODUCTION, DISTRIBUTION

### How One Consumer Goods Plant Coped With Gospriyemka

18200165 Moscow *EKONOMICHESKAYA GAZETA* in Russian No 15, Apr 88 p 15

[Article by V. Klimentyev: "When Authorities are a Blessing"]

[Text] The end of 1986 was an anxious time for the fitters at the vacuum cleaner assembly plant. They prepared for gospriyemka as if for a natural disaster. Who if not the fitters would know how many "Raketa" models went to the consumer, even with the registered stamp of the OTK [Department of Technical Control], but were far from perfection.

It had already been announced to these same fitters that the organ of non-departmental control was headed by the former chief of the plant's consumer goods production A. Artemov, a man well known for his uncompromising nature and for being excellently informed about all the shortcomings at the enterprise. That is why the fitters seriously doubted whether the vacuum cleaners would be accepted by gospriyemka.

It must be said that when optional acceptance of products began in October, these fears were confirmed. Only 58 percent of these products were accepted at the first presentation. In November it was 61 percent and in December 74. However, these 3 months became for the plant workers a distinctive test, when they had to look anew at the technical documentation and introduce changes in the organization of production.

The collective stood the test. Already in January the acceptance of products at the first presentation comprised 97 percent. In the following months this indicator naturally fluctuated, especially during the changeover to new modifications of the vacuum cleaner, but on the average for the year they exceeded 95 percent. Let us compare: on the scale of the whole country in 1987, only 82-85 percent of products were accepted at the first presentation.

The successes were achieved so quickly because the state controllers had not lowered their standards. Joint work on increasing quality became the main goal. The state controllers right away turned to the plant workers. "Don't hide miscalculations and problems, but come to us. Together we can work out measures to eliminate them and determine realistic dates, well planned, which we will help to implement in practice. If you are going to try and hide your shortcomings, we ourselves will establish the dates for correcting the violations uncovered. They will be strict, and there will be no carrying over".

Putting the matter this way was correct. In a month to a month and a half a mass of material on questions of quality was gathered, which 17 state controllers would not have been able to gather in a year. On the basis of this data a plan of measures was worked out by joint efforts.

The official beginning of gospriyemka at the enterprise was marked by resolving organizational and technological questions.

Having successfully withstood the first test they relaxed in the shops. Almost 40 percent of the general plant order and plans for measures remained on paper.

Then A. Artemov proposed to the plant administrators that they draw up an agreement of normative-technical documentation for manufacture, acceptance and delivery of products in 1987. The document was confirmed for one year and was considered in force only under the conditions of timely realization of the joint measures. Its annual reconfirmation allows the inclusion in the document of new measures consistent with improving products produced. Any deviations from the agreement leads to suspension of acceptance.

The plant personnel reacted strongly to A. Artemov's proposal. Practically all the line managers were against it. Nonetheless plant director I. Onufriyenko approved the agreement, despite the fact that even V. Popov, his deputy for product quality, refused to sign it. He approved it because he saw no other way to resolve successfully the problems uncovered by gospriyemka.

And again everything remained as before. But then one day in the plastics shop the acceptance of finished products was stopped because timely measures had not been taken to eliminate technological violations. A commission of the rayispolkom fined the shop chief and the plant's chief engineer 50 rubles each on the basis of the gospriyemka agreement. Only after this were the indicated measures taken seriously in the shops.

At the same time gospriyemka put to the administration a reasonable question: Isn't it time to make vacuum cleaners on the level of the best world models? Of course, earlier it would have been simple to answer such a question. "Raketas" sell like hotcakes and comprises 80 percent of the export of domestic vacuum cleaners. However this time the remark was regarded as timely. The design of the product changed somewhat, the productivity of the vacuum cleaner was increased and its energy consumption lowered.

In 4 months the plant had completely changed over to the output of vacuum cleaners "Raketa-9A" and "Raketa-12A" which in their ergonomic and functional parameters completely conformed to international standards. Earlier this would have required no less than 2 years. After comprehensive testing in Hungary the certificate of

quality and the right to export were given to the Dnepropetrovsk vacuum cleaner, the only vacuum cleaner produced in our country with this right.

And here are some results of the work in the enterprise under the conditions of *gospriyemka*. In the course of a year the number of claims in relation to the group of vacuum cleaners with guaranteed service decreased 79 percent, expenditures on guaranteed repair decreased 33 percent and spoilage dropped to half its former level. The sum of the economic effect, which was achieved by improving product quality, exceeded 200,000 rubles. And if you take into account the output of the newly mastered modifications of the vacuum cleaners, as required by *gospriyemka*, then you get almost 2 million rubles.

The workers see their allies in the state controllers. The brigade leader of the fitting shop, R. Todorchuk, says: "We tried to resolve along with them all the questions connected with quality. I do not recall one instance in which the *gospriyemka* workers brushed aside our requests. We think that it's necessary to present finished products directly to *gospriyemka*, bypassing the OTK".

In order to evaluate the brigade leader's suggestion at its true worth, we must explain that a system of encouragement and sanctions was adopted at the enterprise. For each return of product by *gospriyemka* the workers lose 20 percent of their bonus. Therefore, many people at the enterprise considered R. Todorchuk's proposal to be adventuristic. Nonetheless, there are those who think similarly. They decided as an experiment to send part of their production to *gospriyemka*, bypassing the OTK. True, the experiment has not yet begun, and it's too bad...

## PERSONAL INCOME, SAVINGS

### Systematic Approach Needed in Forming Credit, Monetary Balance

18270049a Moscow DENG I KREDIT in Russian  
No 3, Mar 88 pp 17-21

[Article by A.Ye. Melkov, candidate of economic sciences: "On the Question of Physical-Financial Balance"]

[Text] The restructuring of the economic mechanism, the transition of enterprises and organizations to full cost accounting (*khozraschet*) and self-financing, and creation of the system of sectoral banks are advancing new problems in improving the work of banking and financial bodies and of the financial system as a whole.

The principal reference points determining the direction of restructuring in the operation of the banks and financial bodies are to strengthen the effect of money and credit and of finance on production efficiency, which is possible only if physical-financial balance is achieved between effective demand and its coverage of goods and services.

A scientifically substantiated delimitation between the use of budget financing and the use of bank credit is one of the essential conditions for achieving this goal. In performing one and the same task—financial support for the plan of socioeconomic development on an intensive basis—financial authorities and the bank use their respective differing and inherent forms and work methods and their respective functional mechanism and resources.

As enterprises and organizations make the transition to operation in the context of self-support and self-financing, it becomes urgently necessary to define clearly the line of demarcation between budget resources and bank credit.

The decree of the CPSU Central Committee and USSR Council of Ministers dated 17 July 1987 and entitled "On Restructuring Planning and Enhancing the Role of USSR Gosplan Under the New Economic Conditions" envisages achievement of complete internal consistency of plans as an urgent task.

Strict and scientifically sound observance of the conditions governing use of budget resources and bank credit within their interrelationship is a basic precondition for performing that task.

In this article the problem of the interrelationship between the budget and credit is examined in its following aspects: the purposes of budget financing and credit financing; the resources of the budget and credit; and the economic boundary between budget financing and bank credit financing.

There do not seem to be any purposes, outlays, or needs for money which by definition could be financed only from the budget or only with credit. Any substantiated need for money resources to make outlays which are reproductive in nature might be met from both sources or from one of them.

Requirements related to all current expenditures, the formation of fixed and working capital, expenditures against the future, and even expenditures to cover damages and losses resulting from nonfulfillment of economic and financial plans might be made both from the budget and also with credit (to be repaid). The bank supplies credit even to finance the process of final consumption when it extends loans to individuals.

The Law on the State Enterprise (Association) has substantially broadened the domain in which bank credit is used and increased the need for it.

As is well-known, the bank supplies credit both as a loan of "money" and as a loan of "capital." We accordingly cannot agree with the assertion that we must not "...allow direct or indirect credit financing of outlays which by their nature should be financed from other sources."(1)

But at the same time, those assertions are also erroneous which see the use of credit "...as an instrument for guaranteeing balance in the economy" (2) and which hold that the boundary between the domain of budget financing and the domain of credit financing is determined by the needs of the national economy. The resources of budget financing and of bank credit financing and their economic boundaries differ in their economic content and are regulated by their respective economic laws.

The absence of conditions for prompt repayment of the loan if granted and the granting of loans over and above the economic limit on credit are objective obstacles to the granting of bank loans regardless of the character of the purpose. This follows from the content of the law of credit money.

As is well-known, budget revenues, which figure as a part of the national income appropriated to the state's centralized fund, are the resources for budget financing. And if this fundamental principle corresponded to actual reality, that might be an end to examination of the question both of the resources for budget financing and also the question of its economic boundaries. But the trouble is that a substantial portion of the revenues credited to the budget is built up using credit in anticipation of national income, and the money form of the national income accordingly exceeds its value form.

The turnover tax and a portion of profit are paid into the budget from the social product created, not the social product realized. The budget's illegitimate use of such "income" creates and maintains at a certain level a constant excess (in sizable proportions) of effective demand over its coverage. What is more, a portion of budget revenues do not reflect even the national income created. After all, some goods (rejects and unmarketable goods) are never sold at all. And a product which does not contain use value does not possess value either. Society has repudiated the need for any outlays whatsoever to manufacture it, but the turnover tax and profit have already gone into the budget. However, the practice of premature formation of budget revenues, which satisfies the departmental interests of their recipient, has been given its theoretical "substantiation." In that, it is asserted, under socialism the product is given its recognition as a commodity not by the purchaser in the act of purchase-sale, but by virtue of its meeting the targets of the plan with respect to quantity, quality, and value.(3)

In our view this is a serious mistake that has been harmful to the entire economic system. Even under socialism the producer's right to obtain another product arises only after the product created has assumed the form of money, i.e., has been recognized in its quantity and value by the purchaser. Only in this case are its value and use value realized.

In view of these circumstances the inflow and use of budget revenues, above all the turnover tax, must be made directly dependent on the sale of commodities necessary to the economy and the public. If financial authorities are to be given a greater interest in the production of necessary commodities and in speeding up the pace of their realization, and if the money form and physical form of the national income are to be brought into conformity with one another, there has to be correspondence or maximum possible approximation of the time frame for the use of budget revenues for all earmarked purposes to the time frame for realization of the social product.

This requirement took on concrete form in the decree of the CPSU Central Committee and USSR Council of Ministers dated 17 July 1987 and entitled "On Restructuring the Financial Mechanism and Enhancing the Role of the USSR Ministry of Finance Under the New Economic Conditions," which sets the task of cutting off every possibility of obtaining revenues until the final sale of commodities. This would seem to have settled the question, and all that is needed is to implement this principle. But Point 11 of the same decree stipulated that the payer of the turnover tax shall as a rule be the manufacturing enterprise. Thus the inflow of the turnover tax into the budget is even speeded up (at the present time as much as half of total amounts of the turnover tax are paid into the budget by sales and wholesale depots), occurring still further in advance of the commodity's final sale.

The interrelationship envisaged by the same point of the decree between the turnover tax and the volume of total retail turnover, not the volume of sales of commodities subject to the turnover tax, can only stimulate a growth in the volume of products produced. Approximation between the time budget revenues are created from the turnover tax and the time of the commodity's final sale is not achieved.

The simplest solution of this problem (from the technical standpoint) is possible without changing the present system for accounting and payments of the turnover tax and profit into the budget. A "quarantine" merely has to be established on use of those revenues that would take into account the gap between the time of the commodity's final sale and the formation and expenditure of budget revenues.

This procedure does not, of course, guarantee full correspondence between the time and amount of revenue collection and the time when the commodity is sold, but what remains "behind the line" has no essential importance and can be taken into account afterward, on the basis of the reports for the quarter or for the year.

Budget resources are also formed illegitimately when revenues are collected by appropriating the "own" resources of enterprises and organizations. The advance payment of profit as a budget revenue often has the

result that what leaves the economy and goes into the budget is not profit, but working capital, which deprives the enterprise of the conditions for renewing even simple reproduction. The shortage of "own" working capital in the economy, which has been carried over from year to year, amounts to several tens of billions of rubles. The budget uses the resources "saved" in this way for other purposes, which also creates effective demand not covered by supply.

The procedure of subsequent reimbursement by the budget of value differences previously paid with bank credits has equally adverse consequences for the balance between demand and its coverage.

The absence of measures to prevent the use of credit to form "unearned" revenues of the state budget has been causing serious concern. It is our deep conviction that this problem must accordingly be a subject of the closest and most comprehensive study by both scientists and practitioners, since it is one of the principal channels for creation of effective demand in excessive proportions. After all, the money resources flowing in in the form of the turnover tax were formed by the bank, to be specific, in issuing credit so that settlements can be made between suppliers and customers.

A serious objection might be lodged against the decision of the Savings Bank to extend to depositors consumer credit without requiring that these resources be spent for a specific stated purpose. The social nature of this action is beyond doubt, but its adverse consequences are more weighty.

If we assume that only one depositor (out of every 100) obtains a loan, then the simultaneous growth of effective demand would total on the order of 9 billion rubles according to our calculations. This makes it significantly more complicated to solve the problem of physical-financial balance, augments the shortage of commodities, and intensifies the pressure on the consumer goods market.

Resources for credit financing are the opposite of resources for budget financing even though they are formed on the basis of a single economic base—the sphere of physical production. At the same time, it is important to note that whereas resources for budget financing are determined by the gross social product and national income directly, credit resources (in their size and structure) are determined by the economic limit on credit and by the needs of the circulation of money, which mediates the process of the creation, distribution, and redistribution of the social product and national income.

This particular feature predetermines to a considerable degree a number of fundamental differences between resources for budget financing and those for bank credit financing.

We might begin with the fact, as has already been demonstrated in the economics literature, that the formation of credit resources and their use in extending a loan are a simultaneous act.

Assertions to the effect that the bank first accumulates credit resources and then uses them for credit financing, that the granting of loans only takes place within the limits of resources attracted, contradict the nature of credit as an economic category (in the operative context not of real money—gold, but of its representative—credit money) as well as the nature of the credit mechanism.

The nature of credit is indeed manifested in the fact that the money is given and simultaneously placed in the channels of the circulation of money. The issuing of a loan is an issuing of money, and repayment of a loan is a withdrawal of money. In the process of circulation there is no change in the total amount of operative money resources. All "resources" are always "loaded" into credit investments; their amounts are equal. In the national economy as a whole there are not and cannot be any "uncommitted" credit resources which might be used for issuing loans.

Money resources being freed from circulation in the true sense of the word represent money which has completed the cycle, which has performed its purpose, money that is committed to repayment of the loan. The bank's job in recruiting and mobilizing money resources lies indeed in withdrawing those resources from circulation through repayment of loans once it has guaranteed that the circulation of these resources conforms to the plan. This is a manifestation of the objective requirement of the law of credit money—the conditions for issuing it must also contain the conditions of its repayment.

A second fundamental difference between budget financing and credit lies in the fact that the latter increases effective demand absolutely, while the former only reestablishes demand that was previously deferred.<sup>(5)</sup> By virtue of this circumstance the promptness of debt repayment has exceptional importance to maintaining the balance between demand and its coverage.

In the economic literature attention has often been called to the fact that the order of priority for making payments that existed until recently, in which payments into the budget had first priority, and the repayment of loans fell in subsequent priority groups, resulted in adverse consequences related to the formation of excessive money in circulation.

Establishment of payment priority based on the calendar should be seen as a step in the right direction. Yet it seems to us that we should go "to the end," that is, establish first order of priority for settlement of debt arising out of bank loans. This procedure would better correspond to the effort of economic authorities in the context of full cost accounting and self-financing.

All money resources located in the budget's accounts, in clearing and current accounts, in the accounts of various funds and personal savings accounts are formed on a credit basis through the issuing of credit money which mediates the movement of the social product in its full value ( $c + v + m$ ).

The differences noted above in the formation and use of resources for budget financing and credit give rise to fundamental differences in the setting of their economic limits as well.

The limit on resources for budget financing is unambiguously determined by the volume of revenues received, which come in from the sectors of the economy and from individuals. At the same time, as has been noted, resources that actually reflect the national income from the social product sold to the final consumer insofar as it has been paid into the centralized fund of the state are an economic limit on the resources for budget financing.

The limit on credit resources and thereby on the volume of credit-financed investments as well is determined quite differently. The limit on credit is not imposed in the credit mechanism itself, as is the case when budget revenues restrict expenditures from the budget. Technically, the bank could extend credit without limitation. Even in those cases when the bank extends excessive credit, the balance between credit-financed investments and resources will be observed even though a portion of the money resources formed will be represented not by credit money, but by paper money.

Nor is the limit on credit set by the law of credit money, which determines the conditions for the granting of a loan, but does not contain quantitative limitations.

The assertion that the limit on credit is determined by the amount of temporarily uncommitted money resources the bank has attracted has been very widely disseminated. But, as noted above, the bank's credit resources are formed at the same time that the loan is granted. If credit-financed investments reflect the use of loans as to purpose, then credit resources reflect the placement of those resources in the channels of the circulation of money. The conclusion follows from the discussion above that the economic limit on credit is determined by the law of the amount of money in circulation.

But this principle is not sufficiently taken into account in practice. What is more, recently determination of the very nature of the economic limit on credit and development of a mechanism to enforce it in the process of credit financing have become more complicated.

For instance, a number of economists have expressed the opinion that it is not legitimate to use note issue to extend loans. But it is practically impossible to observe this condition literally. The issuing of any loan signifies in all cases that money is being put into circulation. Even

a loan extended to repay a loan obtained previously is an act whereby money is simultaneously put into circulation and withdrawn from circulation. As we see it, it must obviously be a question of prohibiting the use of above-plan and illegitimate note issue, issue that is not economically justified, for the purpose of credit financing.

The material published in the economic press has revived once again the assertion that credit resources are determined by the money resources temporarily uncommitted.<sup>(6)</sup> The payment of interest to the owners of resources kept in bank accounts has been introduced in order to stimulate the attraction of such resources.

Encouragement of economic entities to keep more working capital in money form deserves attention; this helps to speed up the rate of turnover of physical resources. But the effectiveness of this measure can be manifested only provided the amount of working capital is scientifically substantiated.

As for payment of interest by the bank for resources made available to them on a mutual basis, the role of interest as an incentive does not figure at all in this case, since all clients are strictly assigned to a particular bank.

The assertion that the influence of USSR Gosbank on the specialized banks will be exercised only by means of economic methods of pressure, by virtue of the fact that the resources appropriated are paid for, seems very vulnerable. It would seem impossible to solve the problem of forming credit resources and putting money into circulation in economically justified amounts using only interest rate policy as a management lever. What is more, the importance of the credit plan, which is defined and approved for the credit system as a whole on a centralized basis, is immeasurably increased.

The decree of the CPSU Central Committee and USSR Council of Ministers dated 17 July 1987 and entitled "On Improvement of the System of Banks in the Country and Strengthening the Impact They Have Toward Increasing the Economy's Efficiency" provided that profit would be the principal indicator of the performance of bank institutions.

But, as is well-known, the profit of banks is formed from the interest received from borrowers for credits extended. Moreover, the highest rates are on loans extended on an exceptional basis, and especially on delinquent loans.

Yet the granting of the loan is only the beginning of the "production process" in banking. Stimulating this activity of the bank is like stimulating the trade sector to buy goods rather than sell them. The transition of the banks to full cost accounting and self-financing, it seems to us, necessitates a fundamental change in the procedure for formation of the bank's income.

The result of the bank's activity is the prompt repayment of the loan that has been granted. This is confirmation of the soundness of the loan, of the promptness of withdrawal of money from the circulation of payments, and of prevention of the conditions for formation of an excessive amount of effective demand.

In our view the income of banks under the new conditions must be formed from the interest received only on loans repaid on schedule. All penalty interest should be drained off into the budget. But even this still does not solve all the problems. The banks must cover out of their own income the losses resulting from borrowers who were not creditworthy.

What is more, there is yet another important circumstance we need to note. This is the danger that the use of profit as the principal criterion in evaluating the activity of banks will encourage the bank to give priority to its departmental interests as opposed to those of the entire state. It is clear that the size of profit (both in absolute terms and relative to the total amount of credit) will be higher if borrowers make greater use of credits extended on an exceptional basis at the higher rate of interest.

Thus the performance of the institution of the bank whose customers are violating economic-financial plans, other things being equal, will be given higher marks than the performance of a bank serving enterprises which have been successfully fulfilling plans, which have been using bank credit in minimal amounts, and have in addition been paying the preferential rates of interest.

The criterion for evaluation of bank performance needs to be reexamined and more serious thought given to its economic content. In any case, the criterion must be linked to achievement of the final result of the activity of the system of banks as a whole—physical-financial balance. This is the indicator that combines the interests of all participants in the process of social reproduction with the interests of the entire state.

This is especially important when the problem of balance becomes more acute. We cannot agree that the gap between the effective demand of individuals and the physical counterpart of that demand has occurred solely because of systematic nonfulfillment of the plans for retail trade turnover, while the unwarranted growth of bank balances are a consequence of the higher prices and the aging of the population,<sup>(7)</sup> although these circumstances do in fact play a certain role. But consequences cannot be passed off for causes. In this case we need to speak not about the lagging of retail trade turnover behind effective demand, but about effective demand outstripping retail trade turnover. If the formation of effective demand depends on society's observance of the objective requirements of economic laws, then the volume of production and the volume of sales have objective limitations for each specific period—production capacities, physical resources, and labor resources.

The main reason for violation of physical-financial balance and for effective demand exceeding its coverage in terms of commodities and services, with all the adverse consequences of an economic and social nature that derive therefrom, as we have been attempting to show, is that fundamental differences are being ignored between budget financing and bank credit concerning formation of their respective resources and possibilities of their being used for the stated purpose within the bounds of their respective economic limits.

In our view an effective mechanism has not yet been created for overcoming these adverse phenomena. The new "Rules for Credit Financing of Physical Inventories and Production Outlays" provide for the granting of loans of a money and capital nature by all departments of specialized banks up to the overall limit of resources allocated to them. Under those conditions it becomes urgently necessary to set an economic limit on credit (separating loans "of money" and loans "of capital") for the entire credit system in its interrelationship with the need for money resources of the circulation of money. Use of the present system for determining the total supply of money solely on the basis of the credit plan and the economy's need for borrowed resources will aggravate still more the problem of physical-financial balance. Only by interaction will the plan for the circulation of money and the credit plan be able to take into account the objective requirements of the law of credit money and the law of the amount of money and guarantee in fact the monopoly right of USSR Gosbank to issue money.

Otherwise, we are convinced, it will be impossible for USSR Gosbank to perform the functions placed in its responsibility by Decree No 821 of the CPSU Central Committee and USSR Council of Ministers, dated 17 July 1987, which are the centralized planned management of the country's money-credit system and conduct of the state's unified credit policy, coordination of the activity of the banks of the USSR, and seeing to the organization and strengthening of the circulation of money.

The mechanism of the interrelationship between USSR Gosbank and the sector banks must be worked out so that the monopoly of USSR Gosbank to issue money resources into noncash circulation is observed just as strictly as the monopoly over the issuing of bank notes.

Only under this condition is it possible to achieve the situation where the total amount of credits granted (and thereby also the total amount of operative money) does not exceed the following: for loans "of money"—the amount determined by the law of the circulation of money; and on loans "of capital"—the amount of effective demand that has been deferred.

The problem of physical-financial balance is a key problem in achieving consistency among other proportions of the economy. Scientifically sound demarcation of the functions of budget financing and bank credit financing is one of the conditions for solving this problem.

The practice cannot continue of planning credits on the basis of the economy's need for borrowed resources, without taking into account the need of the circulation of money. Back in 1927 a book edited by S.G. Strumilin made the case for the principle that note issue policy is determined by the potential for development of the circulation of money, not by the need for credit.(8)

Strict observance of the economic limits on credit, along with differentiation into loans "of money" and loans "of capital," is practically impossible in our opinion without drafting a plan of the circulation of money covering all its component elements—the size and rate of circulation and the money supply (in cash and noncash forms).

Of course, successfully solving the problem of balance requires the systems approach and interlinkage of measures to be conducted by banking authorities and financial authorities, along with the other directions for improvement of the economic mechanism.

It seems indispensable that a special balance of effective demand and its coverage be worked out as an integral part of the entire system of the "Balance of the National Economy." Only in this case will the existing principle of primary planning of the money income of the economy, which only then is followed by planning of the commodity coverage (income—commodities), give way to primary determination of the potential for the volume of production and to the planning of money income as a function of that production (commodities—income). This approach to planning will not doom production and commodity sales to a chronic "lag" behind the unwarranted growth of income even in the stage of planning. It will put an end to the defective procedure of establishing financial indicators as quantities given in advance, without due consideration for the possibilities of physical production. Planning on the "commodity—income" principle will bring about an objective demarcation and observance of the economic limits on use of budget financing and bank credit.

#### Footnotes

1. DENG I KREDIT, No 5, 1983, p 31.
2. Ibid., p 28.
3. PLANOVOYE KHOZYAYSTVO, No 8, 1985, p 70.
4. VOPROSY EKONOMIKI, No 3, 1982, p 6.
5. The reference is to budget financing with the surplus of revenues over expenditures formed in the previous period.
6. EKONOMICHESKAYA GAZETA, No 50, 1987, p 4.

7. "Finansy i kredit v sisteme upravleniya narodnym khozyaystvom" [Finance and Credit in the System for Management of the Economy], Moscow, Ekonomika, 1987, p 216.

8. "Perspektivy razvertyvaniya narodnogo khozyaystva SSSR" [Prospects for Development of the USSR National Economy], Moscow, Gosplan SSSR, 1927, p 416.

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#### Moldavia: Survey Discerns Population Saving Pattern

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[Article by L.G. Senokosova, head of the department of political economy of the Kishinev Agricultural Institute imeni M.V. Frunze, candidate of economic sciences, and F.G. Popovich, chief of the budget statistics department of MSSR Goskomstat]

[Text] An extensive program for raising the people's standard of living, for improving the qualitative conditions of the life and activity of the Soviet people, and for increasing everyone's contribution of work to the common cause has been outlined in order to perform the task set by the party, which is to raise the prosperity of the Soviet people to a qualitatively new level. In recent years there has been a notable rise of the wages of workers and employees, remuneration of kolkhoz members has increased, and a sizable number of workers has been exempted from payment of taxes on wages. "In 1970, 18 percent of the population had income exceeding 100 rubles per month per member of the family, and in 1986 this proportion exceeded 60 percent."(1)

The level of financial security of the Soviet people is determined not only by the size of their wages, but also by the growth of social consumption funds and consequently by the growth of payments of benefits to workers from social insurance, old-age and disability pensions, benefits paid to mothers with many children and unwed mothers, student scholarships, improvement of medical service, and expansion of various benefits and services. The payments and benefits received by the country's population from these funds have been growing constantly and at a stable rate. For instance, whereas in 1970 they amounted to 63.9 billion rubles in the USSR and 264 rubles on a per capita basis, by 1986 they had risen substantially and amounted to 155 billion rubles for the country and 556 rubles on a per capita basis.(2)

The growth of personal money income creates the opportunity not only to satisfy current needs, but also to set aside a portion of resources for accumulation in the form of deposits in institutions of the USSR Savings Bank, state loans, and a growth of cash in the hands of individuals.

Personal savings are closely dependent on personal income on the one hand and on current consumption on the other, comprising the difference between the former quantity and the latter. When they save a portion of what they have earned in institutions of the Savings Bank, the workers are convinced from their own experience that it is actually reliable, convenient, and advantageous to keep money there. The Soviet state promptly pays income to depositors in the form of interest and winnings.

Under the present conditions of the development of socialism new needs are arising related to the rise in the level of culture and technology. What earlier was considered a luxury is now becoming a comfort and in the near future a necessity. A certain accumulation is required to meet those needs.

Personal savings have great socioeconomic importance to economic development, to strengthening and regulating the circulation of money in the country, as well as to better organization of the personal family budget of those who work.

V.I. Lenin emphasized that it was necessary "to pay the price of supreme and paramount thrift of the economy in our state to see that every saving, even the smallest, is preserved for development of our large-scale machine industry, for development of electrification...."(3) These instructions also have direct relevance to earned personal savings, which are used in building communism.

The economic potential for the growth of personal money savings creates the conditions for broad development of the savings industry, which is constantly improving and is becoming a solid part of the everyday life of Soviet workers. Whereas in 1970 the country had 80.1 million accounts with an aggregate balance of 46.6 billion rubles, in 1986 the number of savings accounts had risen to 179.2 million, and their aggregate balance was 242.8 billion rubles. It is important to note that the size of the average balance grew substantially over that period, from 581 rubles to 1,354 rubles.(4)

The formation of personal money accumulation as an objective process is determined by the patterns of formation and realization of personal income and by the requirements of the circulation of commodities and money. Interacting as they do with the processes of the formation of personal income and personal consumption, savings are examined in the context of the indicators characterizing the level of prosperity of the population.

It would, of course, be incorrect to see every inflow of personal money resources into accounts as a rise in the standard of living of the workers. Only regular deposits in accounts earmarked for a particular item of consumption and regularly used for those purposes or intended for that use afford the fullest satisfaction of the material and cultural needs of the population.

To elucidate the trends in the formation of savings we need to make a comparison between the growth rate of deposit and withdrawal transactions and the growth rate of account balances. If deposits exceed withdrawals, we can assume that there is a trend toward an intensive growth of money accumulation. If the growth rate of accumulation of money income in accounts exceeds the growth rate of wages, there is reason to say that a portion of accumulation represents unsatisfied demand.

The shaping of the trend of an intensive growth of the country's personal money accumulation depends on the growth of deposits in institutions of the Savings Bank. An analysis of the accounts of individuals in MSSR indicates their rapid growth. For instance, whereas in 1960 there were 78 savings banks in Moldavia with 372,000 accounts, and their aggregate balance was 62.5 million rubles, in 1986 there were 1,194 savings banks with 2,098,000 accounts and an aggregate balance of 2,577 million rubles.(5)

What sort of changes have taken place in the development of savings during the current 5-year planning period from the regional standpoint of the republic? This is eloquently indicated by the figures in the table below.

(At the end of the year)

	1970	1980	1985	1986
1. Aggregate balance, millions of rubles	334.4	1531.8	2332.7	2577
2. Size of the average balance, in rubles	162	1011	1194	1228
in urban settlements	499	1043	1218	1261
in rural localities	391	957	1152	1172
3. Size of the average balance in rural localities relative to that in urban settlements, in percentage	78	91	94	92

At the end of 1986 balances in the accounts of workers, employees, and members of their families represented about 68 percent of the aggregate balance of the republic's accounts, and those of kolkhoz members and members of their families represented almost one-sixth. Moreover, in rural localities the size of the average balance has been growing at a faster pace than in urban settlements. One of the factors behind this growth is that the total income of kolkhoz members is growing at a faster rate because of increased income from the socialized and personal farming operations. A constant and sizable growth of personal money income is characteristic of all rayons of MSSR. But the rate of that growth is

uneven from rayon to rayon. This results from the economic peculiarities of the sectoral structure of the rayon and also the socioeconomic composition of the population.

Performance of a number of socioeconomic measures aimed at increasing in every aspect the prosperity of the workers has promoted not only a growth of personal accumulation and personal money income, but also the formation of new motives for saving and spending money, and it has helped to concretize the purposes for which money is being accumulated and to increase the degree of its readiness for use to purchase consumer goods. A sample survey which has been conducted on the proposed use of savings by families of workers, employees, and kolkhoz members in MSSR has shown that money income is growing faster than total expenditures, and as a consequence individuals are accumulating uncommitted money resources in institutions of the Savings Bank and in their own possession. For example, the size of the growth of savings varied within the limits from 2.5 to 4 percent of the aggregate income of workers and employees over the period 1981-1986, and in the families of kolkhoz members it was between 3 and 6 percent. There has also been some increase in the number of families building up savings. In 1986 the share of worker and employee families in the republic who were surveyed and who had money savings was more than 83 percent, while for families of kolkhoz members it was 80.3 percent; in 1982 the respective figures were 84 percent and 67.3 percent. We should note in this connection that over 47 percent of the families of workers and employees and almost 70 percent of the families of kolkhoz members covered by the survey had a growth of more than 500 rubles in the remainder of cash and bank balances during the year.

During the period of building up money savings 35 percent of the families of workers and employees surveyed and more than one-third of the families of kolkhoz members did not as a rule restrict their current expenditures. What is more, it turned out during the survey that 17 out of every 100 families of workers and employees surveyed and 15 out of every 100 families of kolkhoz members who do not now have savings intend to put aside certain amounts of money in the very near future.

A study of the factors influencing the growth of personal savings showed that there is a close correlation among the increase in the number of families accumulating money resources, the volume of money accumulation, and aggregate income. Here the size of savings is determined not only by the total size of money expenditures, but also by the pattern of distribution of income by population categories and the number of family members who are working. For example, a growth of the aggregate volume of personal money income resulting from an increase in the income of low-paid worker categories may not bring about a substantial increase in

the total amount of savings. At the same time, a predominant growth of the income of high-paid categories could cause a large growth of savings.

An analysis of the indicators of the budgets of an examination of more than 1,000 families in different social groups cross-tabulated for a number of socioeconomic characteristics in 1986 made it possible to reveal the dependent relationship between the size of aggregate income and the change in the level of accumulation. Here the stimulating factor of this trend was mainly the growth of money income. The share of accumulation resulting from the growth of money resources in savings accounts to the total income of kolkhoz members that was used is higher than for workers and employees. For instance, whereas in 1986 that share was 2.3 percent for families of workers and employees, for families of kolkhoz members it was 5.1 percent; in families with per capita total income of 100-125 rubles per month it was 2.5 percent and 3.9 percent, while in families with an income of 175 rubles or more it was 3.4 percent and 13.8 percent, respectively.

A study of personal money savings shows that the bulk of it (62.6 percent for families of workers and employees and 68.5 percent for families of kolkhoz members) is in institutions of the Savings Bank. Moreover, we should point out that workers and employees also use quite often insurance policies and mutual aid funds, while kolkhoz members frequently store their savings in the form of cash. For instance, as of 1 April 1987 in the families of kolkhoz members money on hand per kolkhoz member surveyed was 482 rubles, while the average was 210 rubles for families of workers and employees. Moreover, as per capita total income increases, so does the share of cash, amounting to 500 rubles or more per family.

Under socialism personal savings have a particular purpose. The motives for building up savings can be divided into several groups. We might single out here the desire to accumulate the amount of money necessary to purchase durable consumer goods, clothing, footwear, and housewares. In recent years new needs have arisen related to the need to save for a cooperative apartment, a car, or other purposes of consumption. There is a need in certain population groups to accumulate to meet a need in the future. For example, to live on after the worker retires, to create additional funds for the life of children, to build up reserves for unforeseen expenditures, and so on.

A study of the savings built up with respect to the reason and purpose has great importance. This makes it possible to plan more optimally the production of consumer goods and for the state to make more effective use of personal savings. It is also important to know the "readiness" of savings for purchase of consumer goods, cooperative housing construction, and other purposes which are planned.

An analysis of the distribution of personal money savings by purpose has shown that in recent years certain changes have taken place in the orientation of expenditure of accumulation, as is evident from the table below.

(Relative to all savings, in percentage)

	Workers and Employees		Kolkhoz Members	
	1984	1987	1984	1987
Total savings	100.0	100.0	100.0	100.0
Breakdown:				
upcoming major expenditures	13.6	19.6	12.2	19.3
helping children	30.1	42.6	33.6	42.7
maintaining the same standard of living after retirement	17.9	9.1	23.2	15.7
unforeseen expenditures	29.5	23.0	22.3	14.1
other purposes	5.6	2.7	4.8	6.6
savings not earmarked as to purpose	3.3	3.0	3.9	1.6

The figures in the table indicate an increase in the share of money savings for upcoming major expenditures and to help children and a reduction of savings intended to maintain the same standard of living after retirement and for other expenditures. The largest part of savings accumulated for upcoming major expenditures was intended in the families surveyed to acquire furniture and carpets, building materials, vehicles, and for construction of dwellings and other structures. At the same time, it is disturbing to see a drop in the number of savings accounts intended for purchasing livestock and poultry, which is mainly to be explained by the lack of a sufficient source of animal feed in the republic.

These structural changes in the use of accumulation planned by the family have mainly resulted from objective causes: first, satisfaction of the needs of the population for the principal durable consumer goods; second, from the growth of purchases of these goods with consumer credit and an increase in housing construction; third, a growth of income, making it possible for the particular population group to obtain durable consumer goods out of current expenditures, without diminishing the portion of income to be saved, and also from the growth of expenditures of parents to help their children (weddings, purchase of expensive gifts, construction of housing, purchase of television sets, refrigerators, furniture, cars, and other commodities).

It is legitimate for members of a socialist society to want to maintain their present standard of living after retirement. The state is regularly performing measures to improve social and pension support, which makes it possible to reduce the share of expenditures deferred for the future. But there still remains the problem of using accumulation to reduce the gap between the level of wages and the level of pensions.

We would like to note that workers, employees, and kolkhoz members are not always able to build up the savings intended for construction (because there is no opportunity to join a housing construction cooperative), to purchase housing and building materials, or to acquire livestock. In our opinion, there should be more widespread sale of durable consumer goods and housewares, which are available in sufficient quantity to meet the demand of the public, on credit, since this will make it possible to speed up the turnover of inventories and to reduce distribution costs related to the storage, processing, and movement of the goods. In this connection it would be advisable to use consumer credit with more favorable qualifying conditions, since this could increase the sale of goods even at a moment when demand is shrinking, thereby improving the evenness of the operating pace of enterprises and organizations selling commodities influenced by significant fluctuations of demand. Seasonal sales of commodities should become more widespread practice.

The use of consumer credit also makes it possible to attract into the circulation of money worker cash savings which have not been committed; this will make it possible to increase the effectiveness of the use of money resources and the balance between money income and the supply of commodities.

Socialism precludes the need of money accumulation against cases of such social disasters as unemployment and a sizable rise in the prices of consumer goods. In recent years there has been a notable reduction of the need to build up resources against old age thanks to further development of state social security.

Worker savings under capitalism are different in nature. There they are imposed by economic necessity. The unemployment constantly threatening the worker, the abrupt changes in the conditions of the labor market, and the inevitably recurring crises of overproduction—all of this forces the worker to refrain from satisfying the most urgent needs in order to save "for a rainy day."

In noting definite success in development of the savings industry, there is good reason to note that there is untapped potential in the republic for further expansion of the attraction of uncommitted personal money resources into accounts. As shown by the figures of the sociological surveys, every working member of the family of a worker, employee, or kolkhoz member uses their services 7-8 times a year. But because of a number of deficiencies in the organization of the work of serving the public one quite often sees lines at the savings bank window in which people stand for hours to make various kinds of payments and to obtain their wages. Many branches of Savings Bank departments are located in unsuitable quarters. The center has a large portion of them, and there is a shortage in local housing developments. A substantial number of the branches operate on one shift with 2 days off—Saturday and Sunday, so that it is inconvenient to take advantage of their services given the 5-day workweek. Consequently, there needs to be an improvement in the material and technical base of institutions of the Savings Bank through construction of

new offices and expansion of existing ones; they need to be provided the necessary up-to-date computer equipment in order to raise labor productivity and reduce the cost of operations performed, and steps need to be taken to improve the operating schedule of Savings Bank institutions. This will make it possible to increase the number of depositors and the money balances in accounts and to save on the free time of the population.

The payment of wages through Savings Bank institutions has great national economic importance. This form for issuing wages is economically advantageous both to enterprises and to the workers. But there have been cases in which wages become available not in 2 or 3 days, but in 7 or 10 days or even longer. Quite often the payment of money wages to workers is assigned to particular branches of the department or to particular departments of the Savings Bank, and this is not always convenient for the workers and employees. This makes the workers reluctant to receive their wages in institutions of the Savings Bank. To avoid lines of people waiting for their wages it would be advisable to distribute the payment of wages for various enterprises uniformly throughout the month.

The republic's Savings Bank institutions make little use of a form of settlement such as the noncash withdrawal of an amount from savings accounts to pay rent, telephone, utilities, and other services as well as the use of checks to make payments for goods and services.

Accumulation of money resources in such forms of savings as bonus accounts for young people, which are time deposit accounts to which additional contributions can be made, have recently become widespread in the republic. The bonus account for young people is a form of saving money that instills in young people habits of thrift, a respectful attitude toward the ruble that has been earned by work, and proper organization of the personal and family budget. This type of account, as experience has been showing, considerably increases the interest of young people in saving. Other new types of accounts have also been arousing the interest of the public.

Expansion of the process of attracting personal money resources into accounts can be achieved by conducting a broader organizational and explanatory effort among the public about the importance of savings accounts by presentation of reports, lectures, and talks, by holding evening question and answer sessions, through the social review-competition, and also by improving advertising.

Experience over many years confirms that accumulation of personal money resources in accounts, when it is correctly organized, is mutually beneficial both for the workers and also for enterprises and the state. At present and in the future the activity of Savings Bank institutions will increase considerably, since development of self-employment and the creation of new cooperatives necessitate the organization of broad credit support of individuals, and personnel of the USSR Savings Bank will be facing new tasks as a consequence.

#### Footnotes

1. "SSSR v tsifrakh v 1986 g.: Kratkiy stat. sbornik" [The USSR in Figures in 1986: Brief Statistical Yearbook], Moscow, Finansy i statistika, 1987, p. 189.
2. Calculated from the book "Narodnoye khozyaystvo SSSR za 70 let: Yubileynyy stat. yezhegodnik" [The USSR National Economy Over the Last 70 Years: Commemorative Statistical Yearbook], Moscow, Finansy i statistika, 1987.
3. V.I. Lenin, "Poln. sobr. soch." [Collected Works], Vol. 45, p. 405.
4. "SSSR v tsifrakh v 1986 g.," p. 190.
5. "Moldavskaya SSR v tsifrakh k 70-letiyu Velikogo Okt'yabrya: Kratkiy stat. sbornik" [Moldavian SSR in Figures in Honor of the 70th Anniversary of Great October: Brief Statistical Yearbook], Kishinev, Kartya Moldovenyashke, 1987, p. 130.

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## LABOR

### Statistics Show Problems In Manpower Utilization

18280054 Kiev PRAVDA UKRAINY in Russian 25 Feb 88 p 1

[Article by V. Yurev, "Through the Mirror of Statistics: Engineer With A Broom"]

[Text] The UkSSR State Committee on Statistics reports that last year, in our republic, the diversion of industrial and professional workers from their main employment, in order to carry out a variety of tasks amounted to 29,188,000 man-days. Most frequent was agricultural work, next vegetable depots and storehouses, then construction sites and improvements of areas in the city, calls to the military and enlistment office and so forth. Time and money was wasted. Consequently, expenditures connected with the diversion of industrial and professional workers from their main employment last year came to more than 220 million rubles.

A survey was conducted among those who are more often assigned to the fields. Two thirds stated that their labor production was low, due to poor work organization, stoppages, and the absence of an established norm for output. People find that they can be of greater benefit at their main place of work.

Truly though, wasn't it wasteful for the Donetsk oblast, when in 1987, 11,500 people were diverted from their machines, removed from their construction areas. Only 11,800 man-days were required to be taken from the arsenal of worktime for participation of industrial and professional employees in circles of amateur talent activities and in sports competitions! What kind of boss would go ahead and sing chastushkas when the cows haven't been milked, or lift weights when there is no one to operate the combine in a coal bed? And here vocal chords are being developed and biceps are being inflated.

After checking this out, it isn't such a harmless diversion. In Kharkov oblast, let's say last year, almost 30 million rubles were lost by assisting hothouses and construction sites, as well as from singing and pulling a cable somewhere under the blue, open sky.

In essence, a real reshuffling predominates in transferring people from one branch to another. Frequently, we send builders out to pick carrots, and clerks to the building sites. We give sovkhos workers work having nothing to do with agriculture. On the other hand, tramdrivers stack straw.

When will all this end? Can't there be another way? I have heard complaints from economic planners, factory directors and from the Scientific Research Institute. Why can't the orders of local authorities be stopped? The "authority of the telephone" comes from the party raykoma, who urgently assign 30-40 people to sweep the streets, the roads, and to sort cabbage and pickle squash. But aren't we switching over to cost-accounting, eliminating those we can make due without? Whom then will we send with broom and shovel?

There is no point in writing that in the coming spring and summer, the unfounded diversion of laborers from the factory will cease. But the time has come, with the legacy of permanent bad management, that the prevalence of command authority methods will have to end. Cost-accounting, the necessity to count money, will of course put everything into perspective and clarify the matter.

At the same time, it pays to consider how to utilize pensioners living in the city, as well as persons on leave for work in the fields. Using the example of the fraternal republics, it is possible, let's say, to allow city-dwellers onto potato and vegetable fields, and into orchards, so that they can stock up on fruits and vegetables as part of their wages for work in the fields.

The UkSSR State Committee on Statistics reminds us of the essential thing—to make the most of our worktime. Really now, is it not possible for us to do without a designer with a pickax and an engineer with a broom?

### PRODUCTION

#### **New Machine Tool Developed at Dnepropetrovsk Plant**

18230036 Moscow *SOTSIALISTICHESKAYA INDUSTRIYA* in Russian 11 May 88 p 2

[Article by Yu. Chernyy: "Electronic Modeller"]

[Text] Specialists at the Dnepropetrovsk tool building plant have created a unique milling-modelling machine-tool with electronic control, capable of replacing the most experienced model maker.

The Dnepropetrovsk plant is the only one in the country where such aggregates are produced. The electronic innovation exceeds the best world prototypes.

## MOTOR VEHICLES, HIGHWAYS

### Belorussian First Deputy Minister on Republic's Highways

18290060 Moscow AVTOMOBILNYYE DOROGI in Russian No 11, Nov 87 pp 1-2, inside back cover

[Interview with Vitaliy Ivanovich Denisenko, Belorussian SSR first deputy minister of highway construction and maintenance, by M. G. Sayet, AVTOMOBILNYYE DOROGI correspondent; date and place not given]

[Text] [Question] What are the prospects for the development of the republic's highway branch during the 12th Five-Year Plan? Our correspondent asked Vitaliy Ivanovich Denisenko, the Belorussian SSR first deputy minister of highway construction and maintenance, to talk about this.

[Answer] We are repairing 47,300 kilometers and we are building and reconstructing no less than 7,500 kilometers of highways during this five-year plan. The total volume of highway work is growing by more than 22 percent. The major portion of new highways (6,900 kilometers) will be built in rural areas. The transit sections, which pass through populated points, will become better well-built; a hard surface will be put on all highways leading to the central farmsteads of kolkhozes and sovkhoses.

The reconstruction of the republic's main highways is continuing.

The Leningrad-Kiev-Odessa highway crosses Belorussia from north to south and passes through Vitebsk, Orsha, Mogilev, and Gomel. It was constructed using old parameters and, naturally, cannot completely satisfy modern requirements and insure traffic safety conditions. The reconstruction of the Vitebsk-Orsha highway section, the bridge across the Dnepr River in the city of Orsha, the Gomel by-pass and the large bridge across the Sozh River with a grade-crossing elimination structure will be completed in a very short time. The work to reconstruct the Vitebsk by-pass will be completed during the current five-year plan.

The reconstruction of the Orsha-Mogilev highway section has been started. Here, we plan to make broad use of local sand and gravel material and strengthen the soil with shale sols. Highly porous asphalt cement will be used and this will provide an opportunity to reduce the expenditure of bitumen. Capless pipes made of cement concrete links were used for the first time in the republic during the reconstruction of this road. This considerably reduced labor-intensiveness, simplified technology and lowered the cost of the work.

The reconstruction of the Moscow-Minsk-Brest, Vitebsk-RSFSR border, Minsk-Slutsk, Minsk-Vitebsk (in the section from Minsk to Logoyisk) main highways and the Minsk-Mogilev, Gomel-Rechitsa-Kalinkovich,

Minsk-Grodno, and Minsk-Vilnius highway sections will also continue. The reconstruction of the Minsk ring highway will be completed and a number of bridge crossings over the river will be constructed.

The program for expanding the highway network in the region during the 12th Five-Year Plan provides for the simultaneous solution of three tasks: continuing the reconstruction and completing the construction of major highways and local network roads that provide "vertical" communications; establishing a network of inter-farm ring roads, i.e., connecting neighboring and adjacent ones with a branch; and improving the technical and operating characteristics of all existing roads. The engineering level must be continuously raised; this is dictated by the growing intensity and speed of traffic and by the loads on the highway surfaces.

The inter-farm highway network, whose length is approximately 6,000 kilometers and whose minimal norm should be 22,000-25,000 kilometers based on the calculations of specialists, is being intensively expanded in all of our republic's oblasts at the present time. As is evident, the highway workers still have a large debt to Belorussia's agroindustrial complex. It is also planned to increase the length of general-use roads 1.5-fold and to bring it to 60,000-65,000 kilometers. These are the prospects for the development of our branch. It is a complicated task, but we will solve it without fail.

Considerable work lies ahead, and it must be carried out with high quality. Despite the fact that 93.2 percent of Belorussia's highways have a hard surface, criticism about unevenness, carelessness and imperfections when providing for surface drainage, planning slopes and shoulders and finishing trestle structures is not infrequent. A disregard for the maintenance of run-off strips remains a tenacious defect in the work of many highway organizations.

Author and technical supervision and geodetic and laboratory control require radical improvement. It is necessary to regard low quality and waste in work as a serious violation of state and production discipline with all of the consequences that flow from this.

[Question] Yes, the plans are strenuous ones. Will the designers be able to supply the construction projects with documents on time?

[Answer] Of course, one design institute is not able to cope with this amount of design and research work. That is why the Belremdorproyekt institute for designing highway repairs was established in Belorussia in 1987 on the basis of the existing small separated design organizations and in accordance with a decision of USSR Gosstroy. This will present an opportunity to provide designs for the construction and reconstruction of highways to all organizations that need them; to raise design

quality and effectiveness; to automate design work; and to incorporate the achievements of scientific and technical progress rapidly into highway construction practices.

[Question] The ecology is inevitably disrupted during the reconstruction and especially during the construction of highways. What are Belorussian highway workers doing in order to repair the disruption of the natural balance?

[Answer] A total of 1,660 hectares of land, which have suffered from highway work, will be recultivated for further use in the national economy during the current five-year plan, including 387 hectares that will be put to agricultural use. Expenditures on recultivating the land will reach 2.6 million rubles. It is planned to shift 14 asphalt cement plants to gas fuel in order to reduce the discharge of harmful substances into the atmosphere.

[Question] What importance is now being attached to the aesthetics of highways in Belorussia?

[Answer] A great deal. For several years now, an architectural workshop, which is engaged in designing bus pavilions, rest areas, drinking sources, and various engineering structures, has been successfully operating in Belgiprodor [Belorussian State Design Institute for Researching and Designing Highways and Man-Made Structures]. You see, a highway is first of all the work position of drivers. The surrounding conditions must gladden the eye and take away tiredness. That is why we will devote unremitting attention to the aesthetics of highways from now on.

[Question] Tell us, please, about the role of science in the highway branch.

[Answer] The efforts of scientific workers are aimed at increasing labor productivity and the technical level and quality of industrial and construction products and at lowering material expenditures in production. For example, the mastery of production processes for laying rigid pavements with a monolithic thin-layered covering on local and intra-farm roads and the production of binding materials and concrete using rubber chips for high quality coverings are being provided for. This will permit the durability of these coverings to be increased and the expenditure of bitumen to be reduced. It is planned to use new and effective methods for widening and strengthening highway bridges and to find new materials and develop technological processes for surface processing equipment for various types of highway coatings having increased durability. This will increase the safety of highway traffic.

[Question] In conclusion, I would like to hear about the right-flank enterprises in the branch and about the best people.

[Answer] There are quite a few progressive enterprises in the Belorussian SSR Ministry of Highway Construction and Maintenance, but the Mostostroy [Bridge Construction] Trust, which was awarded the challenge Red Banner of the CPSU Central Committee, USSR Council of Ministers, AUCCTU, and Komsomol Central Committee during the initial year of the 12th Five-Year Plan for its successes in socialist competition, must be listed first on this list.

Under complicated production and climate conditions, the organizations in this trust built a number of bridges, viaducts and other engineering structures with high quality in a very short time. A. A. Lipnitskiy, an MSU-2 crane operator; V. V. Serdyutskiy, a mechanic in this same administration, A. P. Ivanov, MSU-6 senior work producer; A. K. Avaden, combined brigade leader; A. Ye. Safonov, a DSU-12 excavator operator; and G. L. Bitkovskiy, a bulldozer operator, are working in an excellent manner. Other republic road and bridge builders, highway maintenance service workers, drivers of highway machines and motor vehicles, engineers, and architects, who are carrying out increased socialist obligations in honor of the 70th anniversary of Great October, are equaling their work indicators.

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## RAIL SYSTEMS

**Equipment, Rolling Stock Shortcomings Detailed**  
18290094 Moscow IZVESTIYA in Russian 4 Apr 88 p 2

[Article by Yu. Fedorov, Hero of Socialist Labor, and N. Fufryanskiy, doctor of Technical Sciences, Professor, Honored Scientist and Engineer of the RSFSR: "A Mainline Siding: Accelerating the Technical Modernization of Railroad Transport"; first paragraph is IZVESTIYA introduction]

[Text] The state plan for railroad modernization for 1991-2000 is being worked out. The appearance of our transport system at the turn of the 21st century will depend on its scientific-technical base. The state plan should absorb everything new that is known today in domestic and world practice. In order to plan the future on a sound basis, however, we are scrutinizing the present.

Domestic railroads perform over half of the freight turnover and one-fourth of the passenger transport on the steel mainlines of the world, constituting only one-tenth of their total extent. This means that the usefulness of our railroads many times over exceeds that achieved in industrially developed countries.

Any continuously operating, complex system such as railroad transport, however, has its own technical and economic potentials. If this system is regularly overloaded and not updated on time, such treatment will not go unpunished. As far back as 1975 it was obvious that railroad transport was exhausting its reserves. Having completed the transition to electric and diesel locomotive traction, equipped the railroads with economical locomotives, and emerged in first place in the world with respect to power and certain qualitative characteristics of the railroad equipment, USSR Gosplan and the transport machine building management failed to develop their success. On the contrary, the locomotive-building base was sharply curtailed. The leading design bureaus and locomotive building itself were eliminated in Kharkov and Leningrad. Deliveries of diesel shunting locomotives by the Lyudinovo plant were curtailed. Work on developing promising diesels in Kharkov and Penza ceased. Manufacture of mainline freight electric locomotives is concentrated at only two plants—at Novocherkassk and Tbilisi. Freight locomotives are built at one plant in Voroshilovgrad. The work volume for transport in car building, metallurgy and other sectors of industry was curtailed.

The development of new equipment, which even before took a long time, slowed down so much that it would be more correct to speak of resistance to developing it on the part of a number of industry directors than their bent for the new and advanced. Even though the railroads are somehow fulfilling the volume indicators, the quality characteristics—on-time delivery of freight and passengers, speed and safety—do not meet modern requirements. The railroad workers are criticized more and more frequently. Accidents and wrecks with serious consequences have increased in frequency. There is still much that can and should be improved in the work of our railroads, even with the existing resources.

All the same, let us look at certain realities. Our railroads operate with locomotives that are often over 20-30 years old. Locomotives that were made 40-45 years ago are in operation. The power and tractive force of these machines permits the operation of freight trains weighing up to 4000-5000 tons, but the actual need is 6000-8000. The need thus arises to operate trains with a whole chain of locomotives, which impairs the safety of movement and the economic indicators. Moreover, because of the poorly developed locomotive industry, hundreds of passenger trains a day are served by freight locomotives....

Up to now about one-fourth of the freight cars are operated on plain bearings, designed last century; they often break down, cause accidents and are ten times less reliable than modern roller bearings. In the last 30 years, many resolutions have been put forth for re-equipping the entire fleet of cars with roller bearings, but they are regularly unfulfilled.

Let us now look at another extremely important sector of railroad equipment—track services. The rails must be changed after a certain period of service—this is an immutable safety requirement. But for many years running, the undersupplies of rails to replace the worn-out ones have reached several thousand kilometers.

In this way, gradually, railroad transport has been brought to crisis situations. It has been driven onto a siding....

Meanwhile, the national economy imposes increasingly high demands on transport, which has led to the forced loading of cars above the estimated norms, an increase in the length and weight of the trains, etc.

And what about new equipment? How are reserves being prepared?

It cannot be said that we have a clear field here. With respect to the crucial equipment sectors, there are conceptual developments, experimental models are being produced and tests are being made. Over 18 years ago, the USSR was the first in the world to develop powerful electric locomotives with traction motors without commutators. To a considerable extent they solve the problem of increasing power and reliability and reducing operations-repair expenditures. Millions have been spent, but the design of these electric locomotives has not been brought up to the operational requirements. Electric locomotives with analogous systems are already being series-produced and operated abroad.

A two-section diesel locomotive, series 2TE121, with 8000 h.p., has been under development for 18 years. It replaces two diesels of the former series output, substantially increases the throughput capacity of the railroads and ensures a saving of liquid fuel. During this time, three dozen such machines have been built. Because of the slipshod work and, more precisely, the irresponsibility of the Voroshilovgrad diesel locomotive builders, most of this equipment is not fit for operation. It is not ready for series production. The situation is approximately the same in electric locomotive building.

Therefore, railroad transport is seemingly doomed to operate with obsolete equipment for more than another decade. Even if a "miracle" happens and domestic machine building accelerates the rates of working on the new equipment many times over, in this case too, the railroads and the national economy will breathe a sigh of relief only beyond the year 2000—it takes quite some time to modernize many plants and saturate transport with thousands of new locomotives, hundreds of thousands of cars, rolling stock, rails and various machines and mechanisms.

What is the reason for such profound stagnation? IZVESTIYA has already tried to analyze this alarming situation, having published, in 1987-1988, a series of articles studying the reasons for the failures in one of the

sectors of transport machine building—diesel locomotive building. The situation in the sector did not improve after these publications. Not only the plans for the new equipment, but also the output of series locomotives fell through.

It seems to us that, for a fundamental solution to transport problems, the state plan for railroad modernization should encompass two main directions. The first one is to satisfy completely the present and future long-term needs of the railroads. The second is to ensure the development of the appropriate sectors of transport machine building and transport construction on the basis of scientific concepts that predetermine long-lasting existing principles of developing the Union's transport system.

Among the many forms of these problems I should like to single out scientific concepts as the main ones. How is the existing railroad network to be used? Should we, as before, shorten the intervals between moving trains, increase the length and mass and weight of the trains or find the advisable levels of freight intensity? Further, on what scientific basis should the new railroads be built? Should we, in future, lay the track formation on the embankment and the ballast layer and fasten the rails to the sleepers with thousands of nuts and bolts, or make the transition to a track design, new in principle, worked out and partially tested by the eminent scientist I.A. Ivanov, Hero of Socialist Labor—an elevated track without ballast, without a sleeper grid and without the customary design for rail fastening? Finally, what sort of locomotives and rolling stock should there be? The questions of the near future must also be answered. Should express railroad transport with a passenger train speed of 250-300 km/hr and freight train speed of 120 km/hr be developed, and on what scale? To what extent and on what scale should preparation be made to pass new milestones of modern science—developing magnetic-suspension transport, which will make it possible to exceed a speed boundary of 500 km/hr?

The scientists of transport and industry are faced, without exaggeration, with immense problems. They can be solved only with considerable development of all transport science, in its basic directions. There must be free, businesslike all-union discussions. Vigorous use must be made of the powerful experimental base at the disposal of the Ministry of Railways and industry. There must, finally, be a radical change in the actual attitude toward transport science, the scientific centers of which have, in recent years, been noticeably curtailed, impoverished and converted into technical subdivisions of the ministries. Therefore, the master plan for modernization of the railroads should encompass a broad group of complex problems, reminiscent in its volume and importance of the GOELRO [State Commission for the Electrification of Russia] plan.

V.I. Lenin called transport "—our main, perhaps, or one of the main bases of our entire economic system." It is useful to recall this definition of Lenin's, not only at

triumphant moments, but also when applied in daily activity, during the development and fulfillment of the long-range plans for development of the national economy.

12151

## MARITIME AND RIVER FLEETS

**Transport Experiment Supplies Oil, Gas Regions**  
18290095 Moscow RECHNOY TRANSPORT in  
Russian No 3, Mar 88 pp 20-21

[Article by S. Zheleznov (GIIVT) [Gorkiy Institute of Water Transportation Engineers] and V. Gushchin (OIRP) [Ob-Irtysh River Shipping Company]: "An Ice Experiment"]

[Text] The development and build-up of the deposits of the West Siberian Oil and Gas Complex are in many ways determined by the reliability of the transport service, a considerable part of which is performed by the river fleet. The short Arctic navigation period in the Ob Gulf (2.5 months) is complicated by the river bar shallows, the fogs and gale winds and the extreme changeability of the periods of freezing and breaking up of the ice. Delivering cargoes, particularly out-size and heavy ones, through the tundra from the ship unloading sites to the construction sites during the winter months is made more difficult by the lack of roads. Under these conditions, prolonging the navigation period by using line ice-breakers is one of the directions toward increasing the reliability of the transport service for the oil and gas complex.

A considerable contribution to accelerating the development of the Yamburg gas condensate deposit was made by a unique transport operation, successfully carried out by the Ob-Irtysh United Shipping Company in June 1987, to deliver, under the complex conditions of the Ob Gulf, 15 superblock-modules of a complete gas preparation unit (RT, No 11, 1987).

The purpose of the experiment was to reduce by six months the period for putting into operation a complete raw material preparation unit, and to ensure an additional volume of extraction and sale of about 15 billion cubic meters of natural gas.

The installation site for the unit was located 52 kilometers from the Port of Yamburg. During the winter it is impossible to deliver the superblocks through the tundra. Therefore, a temporary winter road, which could be maintained, in consideration of the perennial hydrometeorological conditions, only up to 20-25 June, was extended from the port to the construction site. It cost over 5 million rubles to construct and maintain the road.

Therefore, the shipping company had to deliver all 15 superblocks to Yamburg no later than the deadlines established. Failing to meet them or losing even one block would have meant disrupting the set tasks.

Lack of experience in carrying out this type of transport operations under complex ice conditions and the unsuitability for this purpose of the pontoons for the superblocks complicated the conducting of the experiment.

At the first stage, the superblocks, under the clear water conditions at the edge of the ice, were delivered without any particular difficulty from Tyumen to the mouth of the river section of the Ob by 9 June.

Before the ice run began, specialists from the GIIVT, on board a helicopter, made an air survey of the basic and backup variants of the route, using modern remote-control equipment to measure the thickness of the ice. Along the eastern shore of the Ob Gulf, at the southern section, it was 1.1-1.3 meters and at the end of the route—up to 2 meters. In the central part of the Ob Bay and near the western shore, the thickness was more than 0.15-0.25 meters. The ice covering was characterized by a large number of fall and winter hummocks up to 1.5 meters high. The more accurately defined situation specified extremal work conditions for the ice-breakers, far beyond the bounds of their estimated capacity.

The commanding officers of three line design 1191 vessels, when breaking the channel, were convinced at the beginning of the operation of the impossibility of moving with an uninterrupted course everywhere, and were forced to alternate operational technology, more and more frequently using the method of breaking up the ice by "runs against it" and also by the force of two or three vessels, secured in the wake.

The lack of indications of the navigation situation, the impossibility of visual observation of shore beacons and their radar indiscernibility made it difficult to move forward under the conditions of the shallows of the Nadym bar. When trampling down the ice with the hull, the vessel often ended up being an immobilized prisoner of the ice, and lost time. The great amount of practical experience and the coordination of actions of captains N. Karnaukh, Yu. Shulman and V. Budovskiy played an important role in this complicated situation.

Breaking the channel required 17.5 days, with a 34.7 vessel-day input of ice-breaking equipment. During this time, 75 percent of the total input went toward operating the vessels by "runs against it" and they were underway without interruption only 25 percent of the time.

The total extent of the movement in the ice was 582 kilometers. It should be noted that by the time the superblock towing began, which started at the expiration of the 12-day operation of the ice-breakers, the edge of the ice came up to the harbor at Nachalnyy Island.

Therefore, the length of the channel proper along which the objects were escorted was 296 kilometers, and the fuel consumption to break one kilometer of the course was 2.32 tons.

At the time of the breaking, the channel was completely filled up with small ice floes. The first caravan of four superblocks was towed by two ice-breakers behind a loaded barge, design 16801. The ten-point pack of ice in the channel and the imperfect structure of the pontoons for the superblocks (vertical and low transoms) contributed to ice piling-up between the superblocks. Every 5-7 kilometers the vessels were braced and the towed pontoons were chipped round. The great tortuosity of the course caused frequent jamming of the barge and the need to widen the channel. To ensure the forward movement of the caravan, the command personnel of the vessels were forced to make the roads 10-20 kilometers ahead, breaking up the ice blocks in the channel. A total of seven such roads were made with a total length in both directions of 213 kilometers, and a time input of 40 hours.

The first caravan of pontoons was escorted through without serious damage, in many ways because of using the barge as a buffer, taking up the main dynamic forces of the ice that floated up from under the ice-breakers at high speed. The frequent jamming of the barge in the channel and the need to chip it out, however, subsequently forced discontinuance of its use.

When the superblocks were being towed, the small ice floes that floated up from under the screws of the tugs struck heavily against the lead pontoons. As a rule they were going 10-15 degrees down by the head. In addition, the blows of the ice floes against the corners of the pontoons caused a dynamic heeling of up to 15 degrees. Practically all the pontoons were damaged in the process of being escorted: there were holes and cracks at the bow transoms and in the corners, dents along the entire overhang area, dislocation of the bitts and knees, pressing them inside the pontoon, and breaks in the ropes and locks.

The dangerous nature of the damage attested to the unsuitability of the superblock pontoons for transport under these conditions, which increased the risk of the operation.

The time spent by the ice-breaking equipment in escorting the superblocks along the channel, lengthened in advance, was 35.2 vessel-days. Of them, 19.17 vessel-days were spent directly in towing, and 14.6 vessel-days in chipping out the caravan, crushing the ice in the channel and other technological operations.

The entire ice stage of the operation took 24.2 days. During this time, under complex conditions, 582 kilometers were traveled and 1238 tons of diesel fuel were consumed.

Four ice surveys were made in the process of the operation on board the polar aircraft. Their effectiveness was substantially increased by the fact that the specific tasks, efficiently carried out by the operations staff, were fulfilled.

The demand for necessary information increased, however, after each strong gale-force wind. Therefore, three additional air surveys from helicopters were organized. As a result, a field of flat ice was discovered in the Yamburg region, which accelerated the course-breaking at the least by 2 days; a pool of open water in the ice of up to 70 meters was found in the region of Cape Ostrov, and this was used in escorting the superblocks.

The outcome of the operation was put at great risk by the drifting of the ice fields and their packing up. There are no methods and means of predicting these phenomena. GIIVT representatives, in the process of breaking the course, established, in various parts of it, six groups of reference points, according to which, with the aid of radar and other ship navigation devices, the state of the course broken could be evaluated. The signs of an ice push discovered in this way made it possible to predict the constriction of the channel in the southern section of the course and dictated a helicopter solution to the search for pools of open water in the ice.

The experiment made it possible to establish the main possibility of delivering the superblocks on pontoons, under the ice conditions of the Ob Gulf, using river ice-breakers. This becomes particularly important in consideration of the perspectives for developing deposits on the Yamal Peninsula. The role and significance of river transport in the region for the future must be more precisely defined in this connection.

The transport operation, carried out under high-risk conditions, also revealed many unsolved problems. This type of river transport ice operation has no legal security. The Ministry of the River Fleet must secure the legal status of these operations with normative documents analogous to the Maritime Code.

The economic aspect of the operation is poorly coordinated with the actual effect for the consumer and does not create the appropriate incentives for the development of these transports.

Modern technical and technological equipment and the design of the pontoons for the superblocks do not ensure the necessary reliability for carrying out these operations in the future. An analysis of the work done permits the following conclusions to be drawn.

Design 1191 ice-breakers operated under extreme conditions, considerably exceeding their maximum ice passability. The store of technical devices available on them did not guarantee making the deadlines assigned for performing the operation nor the safety of the superblocks towed on the pontoons. The vessels are not

maneuverable enough. The channel behind them completely fills up with large ice floes. The need to seek and equip them with technical devices to increase the efficiency of operation under these conditions is obvious.

During work using the "tandem" and "reinforced tandem" methods, all the ice-breakers sustained damage—their stern and bow configurations were not designed for this sort of work.

The lines of the superbloc pontoons are unfortunate. As a result, they pile up the broken ice in front of them and are subjected to dangerous blows. Their hulls are not adequately reinforced. The towing device is completely unsuitable for the work. It is located on the waterline level and almost always ends up being under the ice. In addition, it is unsafe to work with the tow rope secured from an area 0.5 meters wide—The ropes often broke down at the clamp and the superblocs would begin to yaw and even break away from each other.

In order to improve the technical equipment for such operations, in our opinion, the following measures must be taken: make operating-economic estimates for design and development of an ice-breaker with higher power (7-11,000 kW), with a variable draft and optimal lines that reduce the jamming, and also construct an ice-breaker-ice-cleaning vessel for the shallow-water conditions of the Ob Gulf; equip ice-breakers with technical devices that ensure the possibility of operating under difficult conditions in shallow water, as well as rapid freeing from jamming, and modernize their stern and bow configurations in order to adapt them for work in double and triple "tandem."

A study should be made of the possibilities of redistributing such transport in consideration of easier use under the sailing conditions of the autumn freeze-up period and of the Port of Yamburg, where, when the railroad goes into operation, large-size cargo flows can be made up.

There must also be operating-economic substantiations and designing of a specialized vessel (possibly of the docking type), capable of operating behind the ice-breaker in both the spring and late-autumn periods and of transporting large structures (superblocks) and ordinary cargoes, which will make it possible in a number of cases to do away with towing superblocs on pontoons with the presently used structure.

To increase the reliability and efficiency of transport operations under ice conditions, it is expedient to develop the technology of air surveys ensuring an efficient calculation and analysis of the thickness, hummocking and break-up state of the ice, a search for optimal routes for the ice courses and efficient information on the ice packing. A work place should be equipped

and fitted out with instruments for the ice survey operator on helicopters and the periodicity of the fly-overs and procedure for leasing civil aviation craft should be established.

The navigation equipment for ice sailing of vessels in the Ob Gulf also needs major improvement. In general, the situation with respect to the organization and direction of these operations in this region, so complex with respect to navigation conditions, must be worked out.

Carrying out the suggested measures will make possible a substantial rise in the reliability of the transport service of the West Siberian Oil and Gas Complex.

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